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United States Department of Agriculture

Forest Service

Public Participation Report

1985

Reviewer's Guide and Response Form

Draft Environmental Impact Statement

Proposed Land and Resource Management Plan

Deschutes National Forest

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"Public sentiment is everything. With public sentiment, nothing can fail. Without it, nothing can succeed. Consequently, he who moulds public sentiment goes deeper than he who enacts statutes or pronounces decisions. He makes statutes and decisions possible or impossible to execute."

Abraham Lincoln

READEX FICHE

Dear Reader,

The Deschutes National Forest's Draft Environmental Impact Statement: Land and Resource Management Resource Plan, summarized in the Reviewer's Guide, represents a milestone in National Forest management. The Forest Supervisor and his staff have given Forest Planning high priority in the last five years. They have been committed to completing the Forest Plans so that we can move into a new era of management.

The Draft Environmental Impact Statement identifies a range of alternative plans for managing the Forest. It also describes a preferred alternative that the Forest Service thinks best treats major issues by you and agency employees.

The Reviewer's Guide with this packet is designed to help you review the planning documents. It may make it easier for you to respond. We must have your comments by May 9, 1986.

This Draft Environmental Impact Statement is subject to some adjustments pending the decision on the Supplemental Environmental Impact Statement for the Regional Guide for the Pacific Northwest Region. The Regional Guide Supplement is being prepared to address spotted owls and could result in some minor adjustments for the Deschutes National Forest.

Your thoughts and concerns are important. I will weigh all public comments carefully. Your comments will help the Forest Supervisor and me to select the best alternative suitable for the Deschutes National Forest.

TOM COSTON
Regional Forester

[redacted]

[redacted]

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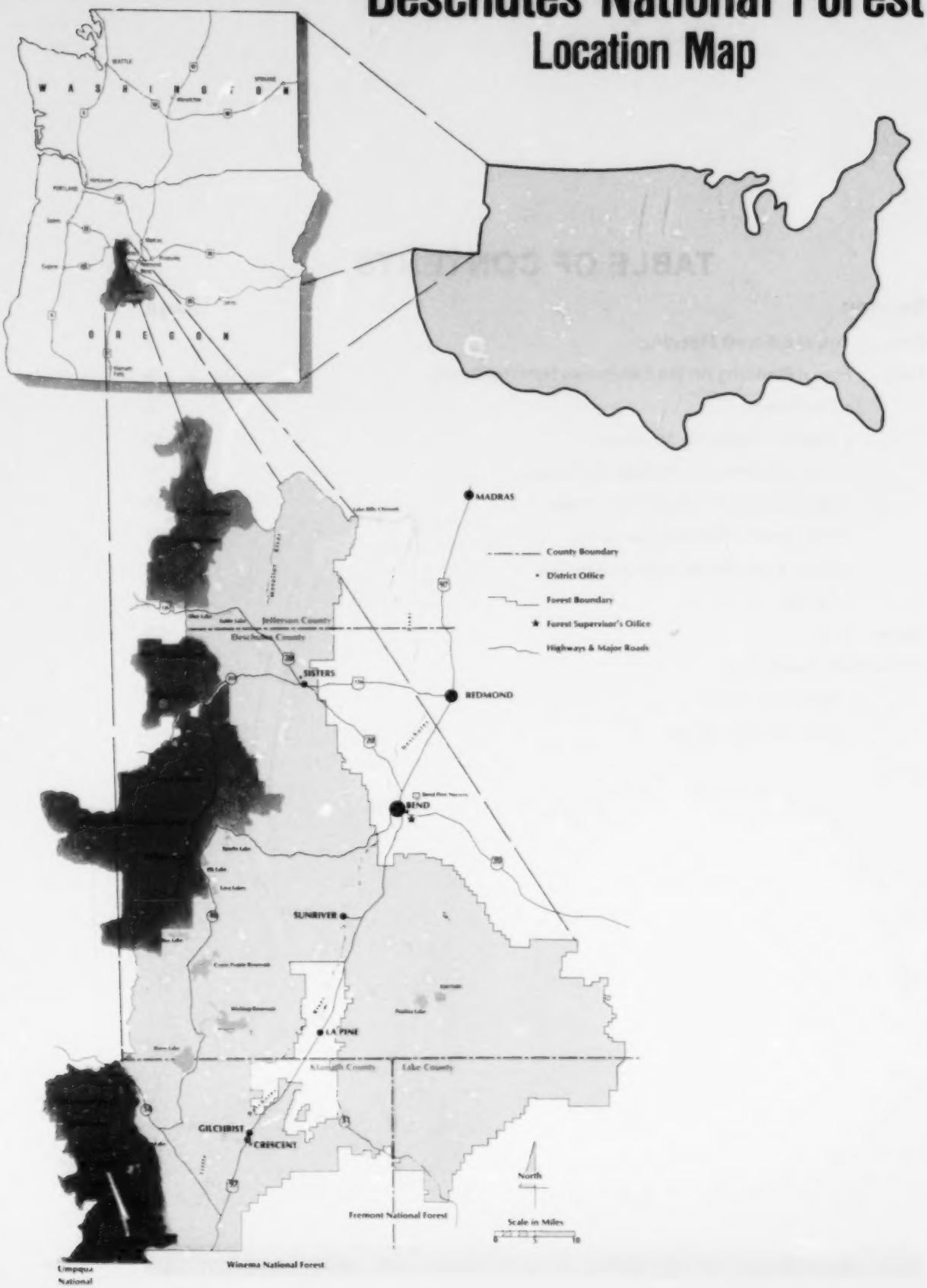
Deschutes National Forest
Location Map



YOU AND FOREST PLANNING

NOT JUST ANOTHER PLAN

There are plans around for just about everything. What kinds of plans have you made lately? How many of us can look ahead 10 years or 50 years and decide on what kind of place we want to live in? The plans for your National Forests are an effort to do just that. This is another opportunity for you to be part of the planning process.

WAIT!

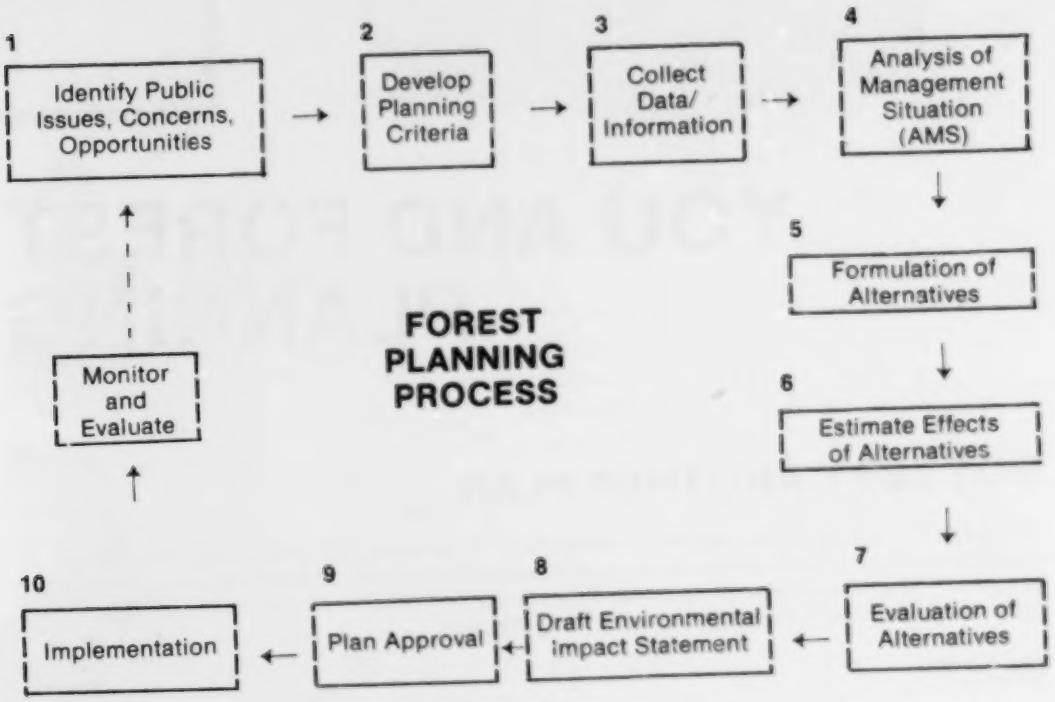
Don't put this down! National Forest planning is complicated. This guide will make it easier for you to study the alternatives presented in the The Draft Environmental Impact Statement (DEIS). It also outlines a way in which you can give us your ideas about what you want us to consider in developing a management plan for the Deschutes National Forest.

FOREST PLANS — WHAT'S INSIDE?

The Forest Service manages 155 National Forests across the Nation. These forests provide products and services such as recreation, timber, grazing, water, minerals, and wildlife for millions of people. People depend on National Forest resources for jobs, as well as for recreation and spiritual needs. Plans are being prepared on every forest to decide how to manage lands and resources to meet a variety of needs. The plans will identify the amount of land to be managed for different uses and products without exploiting or degrading the environment. The plans also show the amounts of different products and services each forest can provide, depending on which resources (recreation, wildlife, timber, etc.) are emphasized. Additionally, the plan describes the management practices to be used in managing each of the forest resources.

National Forests are public lands that belong to all people in the United States, therefore, each plan describes how resources on each forest contribute to the National economy and its well-being, as well as to local communities and environments. Each plan lists alternative ways to manage the forest for different goals and resource mixes. These alternatives have been developed over the past several years by collecting a variety of information from the forest, counties, states, and members of the public.

To implement each final plan, a monitoring and evaluation procedure will be developed to identify any improvements necessary as prescribed management practices are carried out. Adjustments may be needed occasionally throughout the life of the Forest Plan. Each plan will also be re-evaluated with public comment every 10-15 years so that new information can be included.



HOW CAN YOU HELP?

Since National Forests are managed to benefit all of us, it is important that you and other people give us ideas on how the forests should be managed.

The Draft Environmental Impact Statement Land and Resource Management Plan, describes a variety of alternative ways to manage the Deschutes National Forest.

We need your comments and the reasons for those comments on the alternatives, and any other information you want us to consider.

Your response, analyzed along with the responses of others, will be used to develop the final Forest Plan. Information about your desires, interests, and needs are an integral part of the decisionmaking process.

USING THIS GUIDE

This guide has been prepared to help you develop your responses. It contains a summary of the information found in the Draft Environmental Impact Statement, a list of the complete set of available documents and a procedure you can use in preparing your response.

Please take the time to refer to the full set of documents. They are available for checkout from the Deschutes National Forest Supervisor's Office and there are reference copies available at local libraries and at other locations. Informational meetings are scheduled during the public review period. See Section 3 of this document for a list of public involvement activities related to the public review period.

Each page of this guide has space where you can make notes to yourself as you review the material.

There is a response form inside the back cover which we hope will be helpful in sharing your comments.

Take It Step by Step

Condensing several years of planning into one small document is no easy task. It also means that as a reviewer, you will have no easy task. However, if you take it piece by piece, it may be easier. Here are some suggestions:

Visit the Forest. Become acquainted with what is out there. Revisit your favorite places and find some new ones. Take time to become knowledgeable about the area.

Read the section in this document, entitled "Forest Planning on the Deschutes National Forest." This section contains a shortened version of Chapters 1, 2, 3, and 4 in the DEIS and contains:

- "The Forest", which describes the Forest and how it is managed today under the direction described in the 1978 Land Use Plan.
- A section called "Issues - What It's All About," which describes the public issues and management concerns. Review those issues and concerns, which have been developed with the help of the public, so you will be able to evaluate how well each alternative responds to the issues.
- Another part of the guide, "Alternative Ways to Manage the Forest," which describes the alternatives and compares them. Review the environmental consequences discussed in this section.

If needed, **refer to the complete set of documents** for full descriptions of issues, alternatives, environmental consequences, etc.

Complete your comments and mail them so we receive them before May 9, 1986, (use either the response form provided for you or other methods that may be more comfortable for you).

THE COMPLETE SET OF DOCUMENTS

Material in this Reviewer's Guide is found in the complete set of documents. They include:

- Draft Environmental Impact Statement (DEIS)
- Appendices to the DEIS
- The Proposed Forest Plan
- Map Packet (including maps of the Alternatives)

Draft Environmental Impact Statement

Chapter 1, "Purpose and Need," identifies laws and regulations used to direct the planning and environmental analysis process. It also identifies public issues and management concerns about the land and resource management of this National Forest. Audiences of participating publics - organizations, agencies and local governments - will be particularly interested in this chapter.

Chapter 2, "Alternatives, Including the Proposed Action," describes the alternatives, explains their formulation, and compares them. This Chapter will be of interest to those wanting scientific analysis.

Chapter 3, "Affected Environment," presents the biological, physical, social, and economic setting of this National Forest.

Chapter 4, "Environmental Consequences," discusses the environmental consequences of the alternatives, including unavoidable adverse impacts, irreversible or irretrievable effects, energy requirements, and coordination with other agencies. This Chapter is for those interested in a more detailed analysis of the effects of the Alternatives.

Appendices to the DEIS

The Appendices contain technical discussions about various aspects of the planning process. They contain more detailed descriptions of some environments, analyses, and effects. These documents will be of use to the professional reviewer.

Proposed Forest Plan

This contains information about how forest land and resources will be managed if the preferred alternative is implemented. It contains the detailed standards and guidelines for management practices. This document is for the implementors - Forest Supervisors, District Rangers, and their staffs.

It is important to remember that the Proposed Forest Plan is a proposal and that the Draft Environmental Impact Statement is a draft. The information gained in the public review process can result in a modified or a new preferred alternative and could result in revision of the Proposed Forest Plan.

Map Packet

This contains maps of each alternative, plus some resource inventory maps. Information contained on the maps will be of most use to those who are looking for site specificity or who have knowledge of the forest.

FOREST PLANNING ON THE DESCHUTES NATIONAL FOREST

THE FOREST

Setting

The Forest is a 1.6-million-acre wonderland of sculptured peaks, tumbling waterfalls, crystal clear lakes and rivers, miles of timbered lands, and hundreds of species of wildlife and fish. Five designated Wildernesses and a specially classified recreation area — and possibly the best variety of volcanic formations anywhere on this continent — are located within the forest.

The Cascade Range on the western edge of the forest provides a scenic backdrop for the flat, desert areas on this Forest's eastern fringe. Elevations range from 2000 feet at Lake Billy Chinook to 10497 feet at Mt. Jefferson, the second tallest peak in Oregon. Diamond Peak, Mt. Washington, Mt. Jefferson, Three Sisters, and Mt. Thielsen Wildernesses involve 182,506 acres and the Oregon Cascade Recreation Area includes another 42,656 acres.

The sunny, dry climate, the clean air and the rich diversity of recreation attract more than three million visitors each year. People arrive from all over the world to fish and hunt; hike and mountain climb; camp and picnic; sail, canoe, and water ski; explore caves; and cut firewood in the summer. They downhill ski nearly year round on 9,065 foot Mt. Bachelor, one of the largest ski areas in the Pacific Northwest. Cross-country skiing and snowmobiling are popular winter sports.

Water is the focal point for many activities on the forest. The Deschutes and Metolius Rivers, which are nationally known for excellent trout fishing, flow through the forest. Visitors also enjoy these rivers for their many rafting challenges, natural beauty, wildlife watching, and

streamside camping. Scattered throughout the forest are more than 300 mountain lakes and several reservoirs. Stands of ponderosa pine, lodgepole pine, mountain hemlock, Douglas-fir, white fir, grand fir, and Shasta red fir grow on 71 percent of the forest. Although many acres were harvested on the Forest in the early 1900's, old growth stands can still be found and are being perpetuated. More than 212 million board feet of timber were harvested in 1984. The 719,000 acres of usable rangeland supported 29,000 animal unit months of cattle and sheep in 1984. The nearly 350 species of fish and wildlife are enjoyed by hunters, anglers and wildlife watchers. The Bald Eagle, which is Federally listed as threatened, and the northern spotted owl, which is listed as sensitive, live on the forest. The forest has a significant population of osprey, this Forest's symbol.

Spectacular volcanic activity occurred as recently as 1,300 years ago when obsidian flowed from Newberry Volcano. Newberry Volcano, which is 500 square miles in area, collapsed to form Newberry Crater during the ice age. It is the largest such volcano in Oregon. In recent years Newberry Crater has become the source of national interest because of its great potential for geothermal energy. Other areas of special interest are Lava Cast Forest, where tree molds, or casts, were formed by molten lava flowing through a timber stand. It is one of the finest cast collections in the western hemisphere. Lava River Cave is a mile-long lava tube — one of the longest in the Northwest.

The Forest lies mostly in Deschutes County but extends into Jefferson County on the north and into Klamath and Lake Counties on the south. More than 1.85 million acres lie within the Forest boundary; of these, 1.6 million acres are National Forest lands.

The mainstays of the local economy are recreation and timber. The largest cities in the area are Bend and Redmond. Madras, Sisters, LaPine, Crescent, Sunriver, and Gilchrist are other important population centers. Forest headquarters and two Ranger District offices are located in Bend. Ranger District offices are also located in Sisters and Crescent. The Redmond Air Center, located at the Redmond Airport, and the Bend Pine Nursery, are administered by the Forest Supervisor of the Deschutes National Forest.

Principal highways serving the area are U.S. 97, a north-south route, and U.S. 20, an east-west route. Other transportation includes a commercial busline and Roberts Air Field near Redmond, which offers commercial airline services. A railroad serves the area, but passenger service is provided only at Chemult, 70 miles south of Bend.

The Forest setting is described more fully in Chapter 3 of the DEIS, "Affected Environment."

Current Management

The Forest is currently managed through direction provided in the 1978 Land Management Plan. It features a blend of land uses. Dispersed recreation, visual quality, and deer habitat management are emphasized, along with timber and range management. Some emphasis is placed on developed recreation, old growth timber, and threatened and endangered species. This plan does not meet the intent of the National Forest Management Act of 1976 nor does it provide sufficient direction to meet current issues and concerns.

- **Timber harvesting** is on a nondeclining sustained-yield basis. The current annual allowable harvest is about 190 million board feet (39.6 MMCF). In addition, there is another 15 to 20 million board feet (3.2 MMCF) of salvage timber. Mature and overmature lodgepole pine is scheduled to be converted to managed stands in 20 years if this alternative is continued beyond 10 to 15 years.
- Full use of **forage** available to livestock is emphasized. Cost effective management systems and techniques, including fencing and water development, are used to achieve relatively uniform livestock distribution, use of forage, and to maintain plant vigor.
- All **campgrounds** where a fee is charged receive full maintenance and services. Nonfee sites are maintained at reduced service levels. Some new developments are planned, but not enough to meet projected demand.

Forty-five percent of the **unroaded** lands will have an undeveloped prescription and the majority should remain undeveloped at the end of the second decade.

The **summer trail** system for horses and hikers will be maintained at the present level. A mountain bicycle trail system will be developed. Trails for motorcycles and all terrain vehicles (ATV's) will also be developed. Most of the low standard roads on the Forest (those not maintained for passenger cars) will be open to off-road vehicles.

For **winter recreation** the existing nordic and snowmobile trail system will be maintained and expanded. Snow parks will be constructed to meet increases in demand.

- In the **Oregon Cascade Recreation Area** all existing roads would remain open to motorized use and be maintained at their present standards. Wildlife and fish habitat could be improved in the Big Marsh and Little Deschutes River drainages. Dead and dying trees could be salvaged where roads exist. All trails would be open to motorized vehicles and the remainder of the area would be closed. Over-the-snow vehicles will be permitted in the winter.
- **Visual resources** on all state, county, and most major Forest Service roads are managed for scenic values. The same is true for all major buttes and many of the minor, or less prominent, buttes.
- No **rivers** have been recommended for classification under the Wild and Scenic Rivers Act. Development of low-head hydropower facilities on the Deschutes River is not specifically addressed.
- Newberry Crater is currently designated as a National Natural Landmark under the Historic Sites Act of 1935. Some **special interest areas** have been established and others were recommended for designation but no action has been taken on them. The existing and proposed areas are listed below.

Name	Status
Lava Butte	Existing
Lava Cast Forest	Existing
Lavacicle Cave	Existing
Katati Butte	Proposed
Big Hole	Proposed
Hole-in-the-Ground	Proposed
Newberry Crater	Proposed
Castle Rocks	Proposed
Balancing Rocks	Proposed
Horn-of-the-Metolius	Proposed
Wake Butte	Proposed

- Ninety-three percent of the important **deer habitat** is allocated to the Game Species Management Option. Habitat improvement is limited because of low funding levels. The current mule deer population is 20,300.
- Habitat for **cavity** dwelling species would provide for 60 percent of the maximum potential populations in ponderosa pine and mixed conifer and 40 percent in lodgepole pine.
- **Old growth** will be present on approximately 13 percent of the forest. Some of this is a result of areas which are not developed or scheduled for timber harvesting. The remainder is a result of establishing 3 percent of the forested plant communities as old growth.
- No leasing has occurred in the **Newberry Crater Known Geothermal Resource Area.** Leasing decisions on the remainder of the Forest have been addressed by Environmental Assessments keyed to the 1978 Land Management Plan. No geothermal leasing is allowed in Wilderness Areas.

- **Personal use firewood** is available on a permit basis. No upper or lower limits have been established on the total amount of firewood devoted to personal use. The estimated amount of firewood used for personal use is 60,000 cords annually.
- Two **Research Natural Areas** are in existence — one at Pringle Falls on the Deschutes River and the other near the Metolius River.
- Roads associated with specific issues are being maintained in their present condition. They are the **Todd Lake-Three Creeks Lake** road, the Irish-Taylor road, the road to Waldo Lake and the road over Windigo Pass.

Forest Outputs Related to Key Issues

Issue	Result
Timber	
Million cubic feet average annual for the first decade.	39.6
Million board feet average annual for the first decade.	190
Recreation	
Average annual MRVD's of developed recreation.	1,837
Average annual MRVD's of dispersed recreation.	2,036
Wildlife	
Potential mule deer population.	20,300
Potential bald eagle population.	20 pairs
Potential osprey population.	180 pairs
Energy	
Thousands of Acres of high potential geothermal areas available for leasing.	102.9
Amount of personal use firewood provided.	No Specific Amount
Social/Economic	
Present net value	$ 741.31 Million
First decade average revenues to the Government.	$ 28.8 Million
First decade average annual returns to the Counties.	$ 7.2 Million

ISSUES - WHAT IT'S ALL ABOUT

Eight alternatives for managing the land and resources of the Deschutes National Forest have been analyzed in the Draft Environmental Impact Statement. Each addresses a different approach to the local, regional, and national public issues, and management concerns, and provides for the use and protection of resources.

An issue is a subject or question of widespread public interest relating to management of the National Forest.

An extensive and continuing process was used to identify the issues and concerns. Public meetings, newsletters, local news media, and many personal contacts by Forest Service officials were used to gather the issues. Those contacted included a wide cross section of individual members of the public, adjacent private landowners, adjacent National Forests, state and local government agencies, local industry conservation groups, and Native Americans.

Many of the 32 issues that were identified early in the planning process did not receive public comment during the review of the Draft Environmental Impact Statement for the Deschutes National Forest Land and Resource Management Plan, which was released in November 1982. As a result, all issues were reevaluated to determine if they were still issues and should therefore be carried forward in the process. Eighteen of the 32 issues seem to be of particular importance in the management of the Deschutes National Forest.

Treatment of the issues does not necessarily cause conflicts with other issues. In fact, treatment of one issue can complement another issue. For example, the mountain pine beetle epidemic in lodgepole pine can be addressed in a manner that complements the firewood issue if some proportion of the dead material is made available for personal use firewood.

What Are The Issues?

- How should Forest personnel consider **local and regional economies, lifestyles, and population levels** in managing forest lands?
- How much **timber** should be harvested and on what schedule?
- How should the Deschutes, Winema, and Fremont National Forests manage the **lodgepole pine** stands which are infested with **mountain pine beetles** and stands which are susceptible to infestations?
- How should Forest personnel plan to meet future demands for the use of **wood as an energy source?**
- How should this Forest provide for present and future **developed recreation?**
- How can this Forest keep pace with expanding demands for **dispersed recreation?**
- How can this Forest maintain **scenic beauty** while providing for timber production and other goods and services?
- How should this Forest manage **roadless areas?**
- How should this Forest identify and protect its **cultural resources?**
- How should this Forest manage habitat for **threatened, endangered, or sensitive species?**
- What should **wildlife** populations be?
- What level of **old growth** should this Forest manage for?
- Can the Forest meet the assigned **Resources Planning Act** targets?
- What areas on this Forest should be made available for **geothermal** leasing and development?

- How should this Forest manage key **roads,** particularly those lower standard roads that cross the Cascade Crest?
- How should this Forest protect vegetation from damage by **forest pests?**
- How should this Forest manage its **lakes, streams, and wetlands** to prevent degradation?
- To what extent should this Forest enhance or maintain **soil** productivity and control erosion?

ALTERNATIVE WAYS TO MANAGE THE FOREST

Background

This section describes alternative ways to manage the forest for a variety of public issues. The section contains discussions of how alternatives were developed, and describes the alternatives and their effects.

The National Forest Management Act requires that each Alternative considered is capable of being achieved, addresses major public issues and concerns, and is cost-efficient. It also requires a Current Direction Alternative.

Development of Alternatives

Forming alternatives is the culmination of several steps in the National Forest Management Act process. Briefly summarized, these steps are:

- Major public issues were identified through public involvement efforts. Management concerns were added to the public issues.
- Appropriate locations for applying management prescriptions (such as old growth, recreation, timber) were identified by matching them to the capability and suitability of specific sites.
- Potential demand and supply levels were estimated for the various resource areas.
- Alternatives were developed that provided a range of goals and objectives for future management of the forest. The alternatives so formulated addressed the direction needed without changes exceeding the identified capabilities of the forest. Each of the alternatives answered the issues and concerns in different ways.
- A computer program (FORPLAN) was used in analyzing the alternatives.
- The alternatives were refined further, resulting in those described later in this section.

Under the NFMA regulations, the development of alternatives is based on issues and a set of "building blocks". These building blocks are the management prescriptions, each of which is a strategy for managing the resources of an area of land (management area). Each of the management prescriptions used in the forest planning process is comprised of compatible management practices, which are specific resource actions or treatments that address issues.

Management Prescriptions or Areas

Each Alternative involves distributing forest lands to different Management Areas. The acres in the different Management Areas vary with each Alternative and are shown in the table titled, "Acreages in Management Areas by Alternative." The Management Areas for each Alternative are shown on maps accompanying this document.

Brief descriptions of each of the Management Areas follow. They are described by goal statement to aid in understanding the Alternatives.

Management Area 1

To preserve and provide interpretations of unique geological, biological, zoological, and cultural areas for education, scientific, and public enjoyment purposes.

Management Area 1

Management Area 2 (Research Natural Area)

To preserve examples of naturally occurring ecosystems in an unmodified condition for research and education.

Management Area 3-4-5

To protect and manage habitat to provide for the perpetuation of bald eagles, northern spotted owls, and osprey.

Management Area 3

Management Area 4

Management Area 6 (Wilderness)

To preserve the benefits of wilderness values for the public, in accordance with the Wilderness Act of 1964.

Management Area 7

To manage vegetation for optimum habitat conditions on deer transition ranges while providing for domestic livestock forage and wood products.

Management Area 7

Management Area 8

To provide optimum and sustainable levels of timber while providing forage production and opportunities for public use and enjoyment.

Management Area 8

Management Area 9

To provide forest visitors with visually appealing scenery.

Management Area 9

Management Area 10 (Bend Watershed)

To provide water at a quantity and quality which will, with adequate treatment, result in a satisfactory and safe domestic water supply.

Management Area 11

To provide a full range of quality outdoor recreation opportunities within a forest environment that can be modified for visitor use and satisfaction or to accommodate large numbers of visitors.

Management Area 11

Management Area 12

To provide a range of quality recreation opportunities in an undeveloped forest environment.

Management Area 12

Management Area 13

To provide quality winter recreation opportunities within a forest environment that can be modified for visitor use and satisfaction in conjunction with development of geothermal resources.

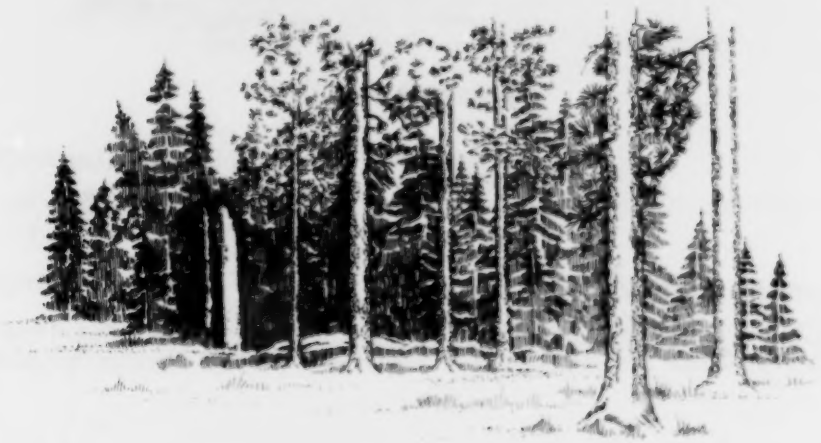
Management Area 13

Management Area 14 (Oregon Cascade Recreation Area)

To conserve, protect, and manage areas in a substantially unmodified condition to preserve their unique character and values.

Management Area 15

To provide old-growth tree stands for (1) preservation of natural genetic pools, (2) habitat for plants and wildlife species associated with overmature tree stands, and (3) contributions to the diversity spectrum.



Management Area 15

Management Area 16 (Experimental Forest)

To provide an area where field research activities are conducted while considering other resource values.

Acreages in Management Areas By Alternative

Management Areas	(Current Direction) A	(RPA) B	C	D	(Preferred) E	F	G	H
1	39,717	18,805	13,440	18,907	19,243	18,043	15,781	16,298
2 (Research Natural Areas)	7,227	6,565	2,939	3,435	6,976	7,648	7,376	7,376
3	3,520	19,797	15,360	20,144	19,797[1]	19,862	21,131	21,109
4	0	8,085	7,280	15,168	8,085	7,376	14,442	16,459
5	9,600	9,531	0	20,997	9,531	9,403	31,317	30,912
6 (Wilderness)	182,506	182,506	182,506	182,506	182,506	182,506	182,506	182,506
7	195,535	192,127	229,337	183,674	212,063	202,895	118,591	94,138
8	657,107	721,291	937,286	702,164	717,219	710,812	779,056	845,722
9	338,223	226,452	43,445	269,305	212,355	233,049	141,856	108,273
10 (Bend M. Watershed)	3,536	3,536	3,536	3,536	3,536	3,536	3,536	3,536
11	8,911	71,821	105,108	98,784	79,648	74,586	57,444	62,106
12	57,361	61,941	1,408	18,192	44,762	62,794	145,450	121,349
13	0	26,309	26,069	19,675	32,640	10,235	0	4,933
14 (Oregon Cascade Recreation Area)	42,656	42,656	42,656	42,656	42,656	42,656	42,656	42,656
15	29,106	18,948	0	11,227	19,353	24,969	49,228	52,997
16 (Experimental Forest)	10,042	10,042	10,042	10,042	10,042	10,042	10,042	10,042
Protection Management[1]	31,861							
Mining Claims[1]	3,504							
Total	1,620,412	1,620,412	1,620,412	1,620,412	1,620,412	1,620,412	1,620,412	1,620,412

[1]Management options included in the 1978 Land Management Plan but which were not used as general strategies in developing the alternatives.

Description of the Alternatives

Introduction

The alternatives describe different ways to manage the land and resources of the Deschutes National Forest. Each is a combination of land uses, management prescriptions, and activity schedules which results in a unique combination of resource outputs, land uses, and environmental conditions.

The management areas are managed according to specified standards and guidelines. These assure that potentially adverse environmental effects are mitigated through avoiding, minimizing, rectifiying, or reducing them, (or in some cases by compensating for them). Some of these standards and guidelines were developed to respond to environmental conditions on the Deschutes National Forest. Others are adopted from the Regional Guide. They may be found in Chapter IV of the Proposed Forest Plan.

The Preferred Alternative

The Preferred Alternative has been identified —**Alternative E.** The Preferred Alternative was selected after careful comparison of all the Alternatives on the basis of the issues, resource outputs, environmental effects, implementation costs, and the "trade-offs" between them. The Preferred Alternative best maximizes the public benefits in an environmentally sound manner. After the Forest Supervisor and Regional Forester and their staffs reviewed the alternatives, **Alternative E** was selected as the Preferred Alternative for display in the Draft Environmental Impact Statement (DEIS).

Alternative Goals and Objectives

Alternative A

Alternative A is the **"No Action or Current Direction"** Alternative. It does not specifically address the identified issues and concerns. It is more a description of continuing present management direction as required by the National Environmental Policy Act.

The "No-Action" Alternative, (Current Direction under the 1978 Land Management Plan), features a blend of land uses intended to balance resource uses. Dispersed recreation, visual quality, and deer habitat management are emphasized along with timber and range management. Some emphasis is placed on developed recreation, old growth, timber, and threatened and endangered species.

- **Timber harvesting** is on a nondeclining sustained yield basis. The current annual allowable harvest is about 190 million board feet (39.6 MMCF). In addition there is another 15 to 20 million board feet (3.2 MMCF) of salvage timber. Mature and overmature lodgepole pine is scheduled to be converted to managed stands in 20 years if this alternative is continued beyond 10 to 15 years.

  Areas managed for developed recreation are nonchargeable* for timber harvest.

- **Developed recreation sites** where fees are charged will be maintained and services provided. Little new construction is planned. Nonfee sites are maintained at reduced levels.

- To provide **dispersed recreation** 45 percent of the unroaded lands will have an undeveloped prescription and the majority should remain undeveloped at the end of the second decade.

  The **summer trail** system for horses and hikers will be maintained at the current level. A mountain bicycle trail system will be developed. Trails for motorcycles and all terrain vehicles (ATV's) will also be developed. Most of the forest low-standard roads (those not maintained for passenger cars) will be open to off-road vehicles.

- For **winter recreation** the existing nordic and snowmobile trail system will be maintained and expanded. Snow parks will be constructed to meet increases in demand.

- In the **Oregon Cascade Recreation Area** all existing roads would remain open to motorized use and be maintained at their present standards. Wildlife and fish habitat could be improved in the Big Marsh and Little Deschutes River drainages. Dead and dying trees could be salvaged where roads exist. All trails would be open to motorized vehicles and the remainder of the area would be closed. Over-the-snow vehicles will be permitted in the winter.

- **Visual resources** along all state, county, and most major Forest Service roads are managed for scenic beauty. The same is true for all major buttes and many of the minor or less prominent buttes.

- No **rivers** have been recommended for classification under the Wild and Scenic Rivers Act. Development of low-head hydropower facilities on the Deschutes River is not specifically addressed.

- Newberry Crater is presently designated as a National Natural Landmark under the Historic Sites Act of 1935. Some **special interest areas** have been established and others have been recommended for designation; but no action has been taken on them. The existing and proposed areas are listed here.

Name	Status
Lava Butte	Existing
Lava Cast Forest	Existing
Lavacicle Cave	Existing

* Nonchargeable means the timber removed from regulated forest land does not contribute to meeting the annual sustained-yield capacity.

Katati Butte	Proposed
Big Hole	Proposed
Hole-in-the-Ground	Proposed
Newberry Crater	Proposed
Castle Rocks	Proposed
Balancing Rocks	Proposed
Horn-of-the-Metolius	Proposed
Wake Butte	Proposed

- **Roadless Area Management.** The next table shows how various roadless areas are affected by the management strategies in this Alternative.

- Ninety-three percent of the important **deer habitat** is allocated to the Game Species Management Option. Habitat improvement is limited due to low funding levels. The current mule deer population is 20,300.

- Habitat for **cavity dwelling species** would provide for 60 percent of the maximum potential populations in ponderosa pine and mixed conifer and 40 percent in lodgepole pine.

- **Old growth** will be present on approximately 13 percent of the forest. Some of this is a result of areas which are not developed or scheduled for timber harvesting. The remainder is a result of establishing 3 percent of the forested plant communities as old growth.

- No action was taken on leasing in the **Newberry Crater Known Geothermal Resource Area.** Leasing decisions on the remainder of the Forest have been addressed by environmental assessments keyed to the 1978 Land Management Plan. No leasing is allowed in Wilderness areas.

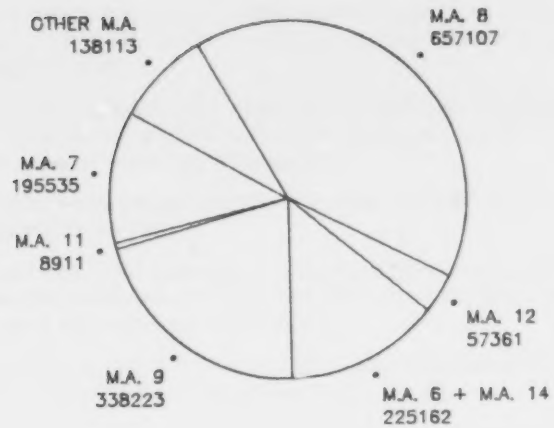
- **Personal use firewood** is available on a permit basis. No upper or lower limits have been established on the total amount of firewood devoted to personal use. The estimated amount of firewood for personal use is 60,000 cords.

- Two **Research Natural Areas** are in existence, one at Pringle Falls and the other near the Metolius River.

- The roads associated with specific issues are being maintained in their present condition. They are the **Todd Lake-Three Creeks Lake road**, the Irish-Taylor road, the road to Waldo Lake and the road over Windigo Pass.

Roadless Area			
Roadless Area	**Developed**	**Partly Developed**	**Undeveloped**
Mt. Jefferson	X		
Metolius Breaks		X	
Three Sisters		X	
West/South Bachelor		X	
Bearwallows		X	
Bend Watershed		X	
Waldo		X	
Charlton			X
North Paulina	X		
South Paulina	X		
Maiden Peak		X	

ALTERNATIVE A
(acres/management area)



Summary of Results Related to Key Issues

Issue	Result
Timber	
Million cubic feet average annual for the first decade.	39.6
Million board feet average annual for the first decade.	190
Recreation	
Average annual MRVD's of developed recreation.	1,837
Average annual MRVD's of dispersed recreation.	2,036
Planned Campground Construction	Some
Wildlife	
Potential mule deer population.	20,300
Potential bald eagle population.	20 pairs
Potential osprey population.	180 pairs
Energy	
Thousands of Acres of high potential geothermal areas available for leasing.	102.9
Amount of personal use firewood provided.	No Specific Amount
Social/Economic	
Present net value	$ 741.31 Million
First decade average revenues to the Government.	$ 28.8 Million
First decade average annual returns to the Counties.	$ 7.2 Million

Alternative B

The goal of this Alternative is to meet the **1980 RPA Program** as identified for the Deschutes National Forest in the Regional Guide. It is similiar to Alternative F but has a different mix of prescriptions on specific areas within the Forest.

Alternative B provides moderate levels of resource outputs. The forest would be intensively used and developed, but options for maintaining undeveloped lands and old-growth ecosystems would be retained.

A mix of developed and undeveloped recreation opportunities would be provided. This Alternative would provide for increases in deer and bald eagle populations. Some of the higher potential geothermal areas are available for leasing.

Scenic quality would be emphasized adjacent to heavily used roads, developed recreation areas, and some roads to trailheads.

- **Timber harvest** levels would be based on a departure from nondeclining yield to meet RPA timber targets. The decline in wood output begins in the sixth decade and declines until the eighth decade when it begins to increase again.

  Generally mature and overmature lodgepole pine would be converted to managed stands in 10 to 15 years. The stands would be converted in 20 years in areas managed for visual resource.

  Areas managed with a recreation emphasis would be nonchargeable.*

- All **developed recreation** campgrounds where a fee is charged will receive a Full Service Level (FSL) of cleaning and maintenance. Nonfee campgrounds will receive Reduced Service Level (RSL) or a minimum standard of cleaning and maintenance. Day use sites, other than those associated with fee campgrounds, will be managed at RSL. Very few sites will be closed.

  New campgrounds and day use facilities such as picnic areas and boat-launch sites will be built to meet the projected demand. Some sites may be built and operated by private developers.

- To provide **dispersed recreation** 41 percent of the unroaded lands will have an undeveloped prescription and 88 percent of the undeveloped lands could remain undeveloped at the end of the second decade, based on the timber harvest schedule. However, roads may be developed in some areas to provide access to treat the mountain pine beetle epidemic and for geothermal exploration.

  The **summer trail** system for horses and hikers will be maintained at the present level. Missing sections will be constructed and substandard sections will be reconstructed. A mountain bicycle trail system will be developed. Trails for motorcycles and all terrain vehicles (ATV's) will also be developed. Most of the low-standard roads (those not maintained for passenger cars) will be open to off-road vehicles.

  For **winter recreation** the existing nordic and snowmobile trail system will be maintained and expanded. Snow parks will be constructed to meet increases in demand.

- In the **Oregon Cascade Recreation Area** all existing roads would remain open to motorized use and maintained at their present standards. Wildlife and fish habitat could be improved in the Big Marsh and Little Deschutes River drainages. Dead and dying trees could be salvaged where roads exist. All trails would be open to motorized vehicles and the remainder of the area would be closed, except for over-the-snow vehicles.

- **Visual resources** along all state and county highways and many Forest Service roads including those to major trailheads, are protected. Most major buttes are also protected, but

* Nonchargeable means the timber removed from regulated forest land does not contribute to meeting the annual sustained-yield capacity.

only part of the areas west of Davis Lake are protected. The area south of Mt. Bachelor and most of Pine Mountain are also protected.

- To ensure a broader range of recreation opportunities — from the source of the **Metolius River** to Bridge 99 and from the source of the **Deschutes River** to the north forest boundary — would be recommended for inclusion in the Wild and Scenic Rivers system as Recreation Rivers. Low-head hydropower facilities would not be compatible on river sections recommended for classification.

- Additional (over Alternative A) **special interest areas** would be included because of unusual geological or botanical values. They are listed here:

Name	Status
Lava Butte	Existing
Lava Cast Forest	Existing
Lavacicle Cave	Existing
Wake Butte	Proposed
Castle Rock	Proposed
Katati Butte	Proposed
Hole in the Ground	Proposed
Big Hole	Proposed
Balancing Rock	Proposed
Moffit Butte	Proposed
Lava River Cave	Proposed
Davis Lake	Proposed

- Thirty to 50 percent of the important **deer habitat** would be maintained in thermal cover. Approximately 25 percent of the shrub communities would be regenerated to younger shrub classes by prescribed burns each decade. The amount and condition of habitat could provide for mule deer population increases to 28,600 animals.

- Habitat for **cavity dwelling species** would be retained at 60 percent of the maximum biological potential.

- **Old growth** will be present on approximately 12 percent of the forest. Some of this is a result of areas which are not developed or scheduled for timber harvesting. The remainder is a result of establishing 5 percent of the forested plant communities as old growth.

- Geothermal leasing in the **Newberry Crater KGRA** could be permitted on the exterior of the Crater and on the southern interior of the Crater. The remainder of the interior of the Crater would not be available for leasing.

  Geothermal leasing could be allowed in a few new areas not already under lease. As a result, 34 percent of the high potential areas, 48 percent of the moderate, and 69 percent of the low would be available for leasing.

- Twenty million board feet (60,000 cords) would be made available annually for **personal use firewood.** The amount available per individual permit would be adjusted, based upon demand. Should demand continue to increase, the amount per permit could be decreased. Demand could make it necessary to limit the number of permits issued. The price of personal use firewood would trend upward and be re-evaluated each year.

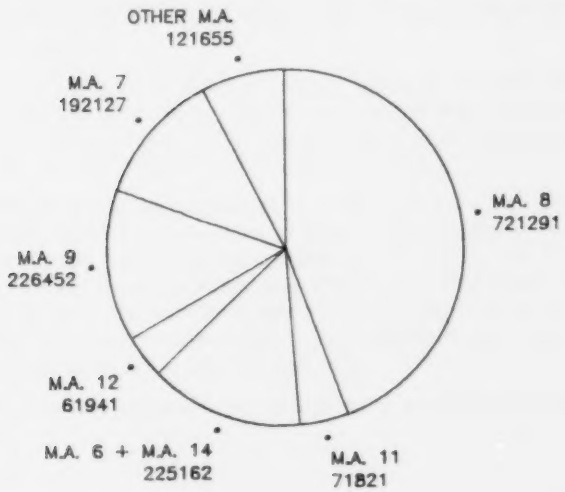
- These areas would be recommended for inclusion in the **Research Natural Area** program:

  Cache Mountain
  Cultus River
  Katsuk Butte
  Torrey-Charlton
  Many Lakes
  Wechee Butte
  Mokst Butte

- The **Todd Lake to Three Creeks Lake road** and the Irish-Taylor Road would be maintained at present standards. Forest Road 5897 (Waldo Lake Road) and Windigo Pass would be improved to allow for increased traffic.
- **Roadless Area Management.** The next table shows how various roadless areas are affected by the management strategies in this Alternative.

Roadless Areas			
Roadless Area	**Developed**	**Partly Developed**	**Undeveloped**
Mt. Jefferson	X		1
Metolius Breaks		X	
Three Sisters		X	
West/South Bachelor		X	
Bearwallows	X		
Bend Watershed		X	
Waldo		X	
Charlton			
North Paulina		X	
South Paulina	X		
Maiden Peak		X	

ALTERNATIVE B
(acres/management area)



Summary of Results Related to Key Issues

Issue	Result
Timber	
Million cubic feet average annual for the first decade.	46.7
Million board feet average annual for the first decade.	196
Recreation	
Average annual MRVD's of developed recreation.	2,567
Average annual MRVD's of dispersed recreation.	2,386
Planned Campground Construction	Meet Demand
Wildlife	
Potential mule deer population.	28,600
Potential bald eagle population.	45 pairs
Potential osprey population.	80 pairs
Energy	
Thousands of Acres of high potential geothermal areas available for leasing.	100.0
Amount of personal use firewood provided.	60,000 cords
Social/Economic	
Present net value	$ 1124.1 Million
First decade average revenues to the Government.	$ 21.6 Million
First decade average annual returns to the Counties.	$ 5.4 Million

Alternative C

The goal of this Alternative is to achieve maximum net value and provide increased use of commodity resources and other resources which have potential to increase contributions to the local economy.

Much of the forest would be used for producing commercial timber. This Alternative would permit the maximum amount of geothermal leasing. Recreation management would focus on providing access and facilities for large numbers of people, such as developed recreation sites, vehicle use in the summer, downhill skiing and snowmobiling in the winter, deer hunting, and fishing. The forest would be heavily roaded. Scenic resources would be protected or enhanced along heavily traveled roads.

- From the lands available for timber production, **timber harvesting** is programmed on 91 percent of them. Lands not programmed are generally those with lower timber values and higher management costs. High levels of timber would be produced. This Alternative would respond to the Forestry Program for Oregon, as defined for the Deschutes National Forest by the Oregon State Department of Forestry. It is a departure timber harvesting schedule with second decade harvest levels lower than the first decade. Mature and overmature lodgepole pine stands would be converted to managed stands in 10 to 15 years.

  Lands managed with an emphasis on developed recreation would be chargeable.*

- All **developed recreation** campgrounds, where a fee is charged, and nonfee campgrounds will receive the Full Service Level (FSL) of cleaning and maintenance. Day use sites associated with motorized use such as boat ramps and snowmobile parking lots will also be managed at FSL. Those day use sites associated with nonmotorized uses, such as wilderness trailheads, will be managed at reduced service level (RSL). No campgrounds will be closed.

  New campgrounds and day use facilities associated with motorized use will be built to meet the projected public demand. Some of these sites may be built and operated by private developers.

- To provide **dispersed recreation** 4 percent of the unroaded lands will have an undeveloped prescription and 70 percent of the unroaded lands could remain undeveloped at the end of the second decade, based on the timber harvest schedule. However, roads may be developed to provide access to treat the mountain pine beetle epidemic and for geothermal exploration.

  The nonmotorized trail system for horses, hikers, and nordic skiers will be maintained at or below the present standard. No new construction or reconstruction would be planned for this system.

  The trail system for motorized use which would include motorcycles, all terrain vehicles (ATV's), and snowmobiles would be maintained at or above the current standard and this system would be expanded. Most of the low-standard road systems (those not maintained for passenger cars) would be open to off-road vehicles.

- In the **Oregon Cascade Recreation Area** all existing roads would be open to motorized use. Recreation facilities could be developed at Summit Lake, Big Marsh, and along the Little Deschutes River. Additional trails for snowmobiles would be developed. Fish habitat improvements could be developed for Big Marsh and the Little Deschutes River. Tree stands that are dying or in imminent danger of insect attack could be harvested. Motorized vehicles would be restricted to the existing and planned trails and roads in summer. In winter, over-the-snow vehicles would be permitted.

- All major state and county highways and Black Butte would be managed for **visual quality**.

* Chargeable means the timber removed from regulated forest land contributes to meeting the annual sustained-yield capacity.

- Special interest areas are established to protect, preserve and interpret unique, scenic, biological and geological features. Existing and proposed areas are listed here:

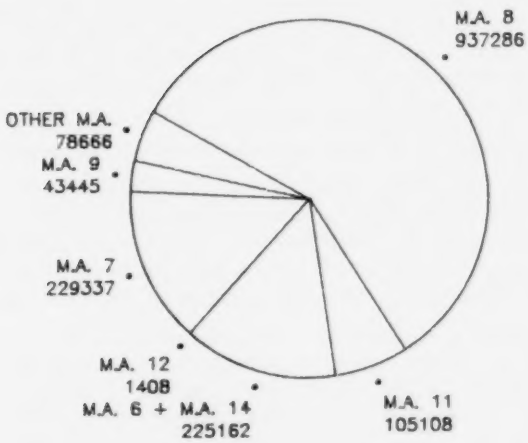
Name	Status
Lava Butte	Existing
Lava Cast Forest	Existing
Lavacicle Cave	Existing
Wake Butte	Proposed
Lava River Cave	Proposed

- No **rivers** will be recommended for classification under the Wild and Scenic Rivers Act of 1968. Low-head hydropower facilities would be compatible with this Alternative.
- Thirty to 50 percent of the important **deer habitat** would be in thermal cover; 25 percent of the shrublands would be regenerated each decade by burning. The habitat conditions provided could potentially support 32,300 mule deer.
- No special provisions for **old growth** are provided. However, approximately 8 percent of the Forest will be in old growth as a result of areas which remain undeveloped.
- Geothermal leasing in the **Newberry Crater Known Geothermal Resource Area** could be permitted in the entire area. Some restrictions would be necessary to protect recreation sites and facilities.

  Leasing and development could be permitted for significant portions of the remainder of the forest not already under lease.
- No special provisions would be made to insure that **personal use firewood** will be available. Personal use of firewood would have to compete with other markets for the wood and prices could be based primarily on market value allowing prices to increase significantly.
- The Torrey-Charlton **Research Natural Area** would be recommended for inclusion in the Research Natural Area program.
- The **Todd Lake-Three Creeks Lake road** would be improved for increased traffic volume and to a standard where passenger cars could use it. The Irish-Taylor Road would also be improved and upgraded. Forest Road 5897 (Waldo Lake Road) would be improved to a two-lane paved highway. The Windigo Pass Road would be improved and upgraded.
- **Roadless Area Management.** The next table shows how various roadless areas are affected by the management strategies in this Alternative.

Roadless Areas			
Roadless Area	**Developed**	**Partly Developed**	**Undeveloped**
Mt. Jefferson	X		
Metolius Breaks	X		
Three Sisters	X		
West/South Bachelor	X		
Bearwallows	X		
Bend Watershed		X	
Waldo		X	
Charlton	X		
North Paulina	X		
South Paulina	X		
Maiden Peak	X		

ALTERNATIVE C
(acres/management area)



Summary of Results Related to Key Issues

Issue	Result
Timber	
Million cubic feet average annual for the first decade.	65.2
Million board feet average annual for the first decade.	290
Recreation	
Average annual MRVD's of developed recreation.	3,493
Average annual MRVD's of dispersed recreation.	2,686
Planned Campground Construction	Meet demand
Wildlife	
Potential mule deer population.	32,300
Potential bald eagle population.	45 pairs
Potential osprey population.	80 pairs
Energy	
Thousands of Acres of high potential geothermal areas available for leasing.	126.1
Amount of personal use firewood provided.	Competitively Sold
Social/Economic	
Present net value	$ 1285.81 Million
First decade average revenues to the Government.	$ 34.9 Million
First decade average annual returns to the Counties.	$ 8.7 Million

Alternative Ⓓ

This Alternative would provide dispersed recreation opportunities combined with timber production and protection of visual resources. Recreation management would focus on providing vehicle access for single-day, short-term use. To complement the recreation emphasis of this Alternative, scenery along travel routes and areas viewed by large concentrations of people would be maintained or enhanced. A large part of the forest would be intensively managed for timber production but would be screened from view from major roads and trails. Much of the area with geothermal potential could be leased. High levels of habitat for osprey, eagles, and deer would be provided.

- From the lands tentatively available for **timber production,** 87 percent are used to develop the timber program. Lands not used are generally those with lower timber values and high management costs.

  Timber harvesting would be scheduled, based on nondeclining yield. Mature and overmature lodgepole pine stands would be converted to managed stands in 10 to 15 years.

  Land on which recreation is emphasized would be classed as nonchargeable.*

- All **developed recreation** campgrounds where a fee is charged will receive reduced service level (RSL) or a minimum standard of cleaning and maintenance. All nonfee campgrounds will be closed. Day-use activities will be emphasized and all day-use sites will be managed at a full service level (FSL).

  No new campgrounds will be constructed. Additional day-use facilities such as picnic areas and boat launch sites will be built to meet the projected public demand.

- To provide **dispersed recreation** 14 percent of the unroaded lands will have an unroaded prescription, and 90 percent of the unroaded lands could remain undeveloped at the end of the second decade, based on timber harvest schedules. However, roads may be developed in some areas to provide access to treat the mountain pine beetle epidemic and for geothermal exploration.

- The **summer trail** system for horses and hikers will be maintained at the present level. Missing sections will be constructed and substandard sections will be reconstructed. A mountain bicycle trail system will be developed. Trails for motorcycles and all terrain vehicles (ATV's) will also be developed. Most of the low-standard roads (those not maintained for passenger cars) will be open to off-road vehicles.

  For **winter recreation** the existing nordic and snowmobile trail system will be maintained and expanded. Snow parks will be constructed to meet increases in demand.

- In the **Oregon Cascade Recreation Area** roads to Summit Lake, Big Marsh, and the Little Deschutes River would be upgraded and improved for day use. Facilities for day use, such as picnic grounds, could be provided. Fish habitat could be improved and access for fishing areas upgraded. Motorized vehicles would be restricted to existing roads, trails, and planned trails in the summer. In winter, over-the-snow vehicles would be permitted.

- This alternative has a heavy emphasis on the **visual** resource. All state and county highways and many Forest Service roads, including those to major trailheads, are protected. The same is true for all major buttes and many of the minor, less prominent buttes. Much of Green Ridge and the Horn of the Metolius are also protected.

- The **Deschutes River,** from Wickiup Reservoir to the north Forest boundary, would be recommended for classification as a Recreation River under the Wild and Scenic Rivers Act. The same would apply to the Metolius River from its source to Lake Billy Chinook, and the Little Deschutes River from its source to its junction with the Deschutes River. Low-head hydropower facilities would not be compatible with this Alternative, except where existing structures could be used without altering water flows.

*Nonchargeable means the timber removed from regulated forest land does not contribute to meeting the annual sustained-yield capacity.

- Nine new **special interest areas** would be added. They are listed below.

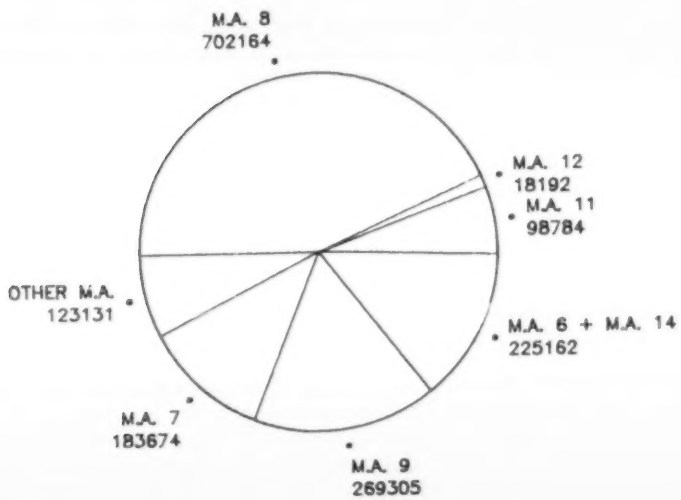
Name	Status
Lava Butte	Existing
Lava Cast Forest	Existing
Lavacicle Cave	Existing
Wake Butte	Proposed
Castle Rock	Proposed
Katati Butte	Proposed
Hole in the Ground	Proposed
Big Hole	Proposed
Balancing Rock	Proposed
Moffit Butte	Proposed
Lava River Cave	Proposed
Horn of the Metolius	Proposed
Hosmer Lake	Proposed

- Thirty to 50 percent of the important **deer habitat** would be maintained in thermal cover. Approximately 25 percent of the mature and decadent shrub lands would be rejuvenated per decade by burning. The amount and condition of habitat provided could increase the mule deer population to 29,800.
- Habitat would be managed for **watchable wildlife** and could result in increases in populations of osprey, spotted owls, and bald eagles.
- **Old growth** will be present on approximately 14 percent of the forest. Some of this is a result of areas which are not developed or scheduled for timber harvesting. The remainder is a result of establishing 3 percent of the forested plant communities as old growth.
- Geothermal leasing in the **Newberry Crater KGRA** could be permitted on the outside slopes of the Crater but would not be permitted inside the Crater.

  Leasing and development of geothermal resources could be permitted in much of the Forest not already under lease.
- No special provisions would be made to insure that **personal use firewood** will be available. Personal use of firewood would be competitive with other markets. Prices charged would be based primarily on market value, therefore, prices could increase significantly.
- Torrey-Charlton Butte and Wechee Butte would be recommended to be included in the **Research Natural Area** program.
- The **Todd Lake to Three Creeks Lake road** would be upgraded and improved. The Irish-Taylor road would also be upgraded and improved to support higher levels of day-use recreation. The same would apply to the Windigo Pass road. Waldo Lake Road would be improved to a paved two-lane highway.
- **Roadless Area Management.** The next table shows how various roadless areas are affected by the management strategies in this Alternative.

Roadless Area			
Roadless Area	**Developed**	**Partly Developed**	**Undeveloped**
Mt. Jefferson	X		
Metolius Breaks	X		
Three Sisters	X		
West/South Bachelor	X		
Bearwallows	X		
Bend Watershed		X	
Waldo		X	
Charlton	X		
North Paulina		X	
South Paulina		X	
Maiden Peak		X	

ALTERNATIVE D
(acres/management area)



Summary of Results Related to Key Issues

Issue	Result
Timber	
Million cubic feet average annual for the first decade.	46.1
Million board feet average annual for the first decade	193
Recreation	
Average annual MRVD's of developed recreation.	2,983
Average annual MRVD's of dispersed recreation.	2,551
Planned Campground Construction	None
Wildlife	
Potential mule deer population.	29,800
Potential bald eagle population.	45 pairs
Potential osprey population.	150 pairs
Energy	
Thousands of acres of high potential geothermal areas available for leasing.	114
Amount of personal use firewood provided.	Competitively Sold
Social/Economic	
Present net value	$ 1121.25 million
First decade annual revenues to the Government.	$ 20.6 Million
First decade average annual returns to the Counties.	$ 5.2 Million

Alternative Ⓔ - The Preferred

This Alternative is similar to Alternatives B (RPA) and F but different prescriptions have been applied to specific areas of the Forest. Maps must be consulted to fully understand the differences between these Alternatives.

Alternative E provides moderately high levels of timber outputs. The Forest would be intensively used and developed, but options for maintaining undeveloped lands and old-growth ecosystems would be retained.

A mix of developed and undeveloped recreation opportunities would be provided. This Alternative would provide for increases in deer and bald eagle populations. Some of the higher potential geothermal areas are available for leasing and others are not.

Scenic quality would be provided adjacent to heavily used roads, developed recreation areas, and some roads to trailheads.

- Of the lands tentatively suitable for timber production, **timber harvesting** is scheduled for 87 percent of the area. Lands not programmed are generally lower timber value lands with high management costs.

  Regulated timber harvest scheduling would be based upon a departure from nondeclining yield. Generally, mature and overmature lodgepole pine would be converted to managed stands in 15 years.

  Where recreation is emphasized, the lands are classed as nonchargeable.*

- All **developed recreation** campgrounds where a fee is charged will receive a Full Service Level (FSL) of cleaning and maintenance. Nonfee campgrounds will receive Reduced Service Level (RSL) or a minimum standard of cleaning and maintenance. Day-use sites, other than those associated with fee campgrounds, will be managed at RSL. Very few sites will be closed.

  New campgrounds will be constructed to meet increasing demand. Additional day-use facilities, such as picnic areas and boat launch sites, will be built but will not meet the projected demand. Some sites may be built and operated by private developers.

- To provide **dispersed recreation** 31 percent of the unroaded lands will have an undeveloped prescription and 84 percent of the unroaded lands could remain undeveloped at the end of the second decade, based on the timber harvest schedule. However, roads may be developed in some areas to provide access in treating the mountain pine beetle epidemic and for geothermal exploration.

  The **summer trail** system for horses and hikers will be maintained at the present level. Missing sections will be constructed and substandard sections will be reconstructed. A mountain bicycle trail system will be developed. Trails for motorcycles and all terrain vehicles (ATV's) will also be developed. Most of the Forest low standard roads (those not maintained for passenger cars) will be open to off-road vehicles.

  For **winter recreation** the existing nordic and snowmobile trail system will be maintained and expanded. Snow parks will be constructed to meet increases in demand.

- In the **Oregon Cascade Recreation Area,** all existing roads would remain open for motorized use and would be maintained in the present condition. Wildlife and fish habitat could be improved in the Big Marsh drainage. Tree stand damage by insect or fire could be harvested and any new roads would be closed after harvest. Motorized vehicle use would be limited to existing roads and trails in the summer with no restrictions to over-the-snow vehicles in winter. Domestic livestock grazing is permitted where it is compatible with wildlife and recreation values.

- All state and county highways and many Forest Service roads,including those to major trailheads, are protected for **visual quality.** Most major buttes are also protected, but only

* Nonchargeable means the timber removed from regulated forest land does not contribute to meeting the annual sustained-yield capacity.

part of the areas seen west of Davis Lake is protected. The area south of Mt. Bachelor and most of Pine Mountain are also protected.

- Sections of the **Deschutes River,** from Spring River to the north forest boundary, and the **Metolius River,** from its source to Bridge 99, would be recommended for inclusion in the Wild and Scenic River system as Recreation Rivers. Low-head hydropower facilities would not be compatible in areas recommended for classification.

- Additional **special interest areas** would be included because of unusual geological or botanical features. They are shown below:

Name	Status
Lava Butte	Existing
Lava Cast Forest	Existing
Lavacicle Cave	Existing
Wake Butte	Proposed
Castle Rock	Proposed
Katati Butte	Proposed
Hole in the Ground	Proposed
Big Hole	Proposed
Balancing Rock	Proposed
Moffit Butte	Proposed
Lava River Cave	Proposed
Davis Lake	Proposed
Hosmer Lake	Proposed

- Thirty to 50 percent of the important **deer habitat** would be maintained in thermal cover. Approximately 25 percent of the shrub communities would be regenerated to younger shrub classes by prescribed burns each decade. The amount and condition of habitat could provide for mule deer population increases to 25,900 animals.

- Habitat for **cavity dwelling species** would be provided at 60 percent of the maximum biological potential. Habitat for osprey would decrease.

- **Old growth** will be present on approximately 12 percent of the forest. Some of this is a result of areas which are not developed or scheduled for timber harvesting. The remainder is a result of establishing 5 percent of the forested plant communities as old growth.

- Geothermal leasing in the **Newberry Crater KGRA** could be permitted on portions of the area.

  Geothermal leasing could be permitted in some additional areas not already under lease.

- Twenty million board feet (60,000 cords) would be made available annually for **personal use firewood.** The amount available per individual permit would be adjusted, based on demand. Should demand continue to increase, the amount per permit could be decreased. Demand could reach a point where it may be necessary to limit the number of permits issued. The price of personal use firewood would trend upward and be re-evaluated each year.

- The following areas would be recommended for inclusion in the **Research Natural Area** program:

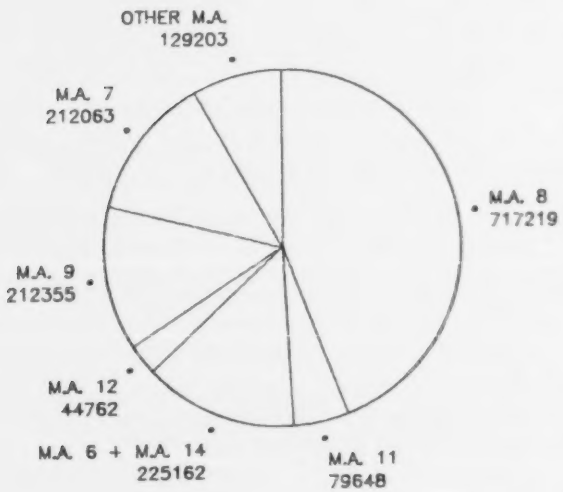
  Cache Mountain
  Cultus River
  Katsuk Butte
  Mokst Butte
  Torrey-Charlton
  Many Lakes
  Wechee Butte

- Windigo Pass and the **Todd Lake to Three Creeks Lake road** would be maintained in their present condition and would not be improved. The same would apply to the Irish-Taylor Road. Forest Road 5897 (Waldo Lake Road) could be improved into a two-lane paved highway.

- **Roadless Area Management.** The next table shows how various roadless areas are affected by the management strategies in this alternative.

Roadless Areas			
Roadless Area	**Developed**	**Partly Developed**	**Undeveloped**
Mt. Jefferson	X		
Metolius Breaks		X	
Three Sisters		X	
West/South Bachelor	X		
Bearwallows	X		
Bend Watershed		X	
Waldo		X	
Charlton		X	
North Paulina		X	
South Paulina		X	
Maiden Peak		X	

ALTERNATIVE E
(acres/management area)



Summary of Results Related to Key Issues

Issue	Result
Timber	
Million cubic feet average annual for the first decade.	51.6
Million board feet average annual for the first decade.	225
Recreation	
Average annual MRVD's of developed recreation.	2,770
Average annual MRVD's of dispersed recreation.	2,493
Planned Campground Construction	Meet Demand
Wildlife	
Potential mule deer population.	25,900
Potential bald eagle population.	45 pairs
Potential osprey population.	80 pairs
Energy	
Thousands of Acres of high potential geothermal areas available for leasing.	126.1
Amount of personal use firewood provided.	60,000 cords
Social/Economic	
Present net value	$ 1123.4 Million
First decade average revenues to the Government.	$ 26.0 Million
First decade average annual returns to the Counties.	$ 6.5 Million

Alternative F

Management under Alternative F would be to provide moderate levels of resource outputs. It would provide for intensive use and development of the Forest, but some portions of the Forest would be retained as undeveloped lands and old-growth ecosystems.

A mix of developed and dispersed recreation opportunities would be provided. Emphasis would be placed on maintaining current hunting opportunities and on increasing habitat and populations for threatened and endangered species. Some of the higher potential geothermal areas would not be available for leasing.

Scenic quality would be protected adjacent to heavily used roads, developed recreation areas, and some roads to trailheads.

- From the lands tentatively available for timber production, **timber harvesting** is programmed on 83 percent of them. Lands not programmed were generally lower timber values with high management costs.

  Timber harvesting would be scheduled on a nondeclining yield basis. Mature lodgepole pine would be converted to manage stands in a 20-year period.

  On lands where recreation is emphasized, timber harvesting would be nonchargeable.*

- Ninety percent of all **developed recreation** campgrounds where a fee is charged will receive the Full Service Level (FSL) of cleaning and maintenance. Nonfee campgrounds will receive Reduced Service Level (RSL) or a minimum standard of cleaning and maintenance. Day-use sites will be managed at RSL. A few low-use sites will be closed.

  New campgrounds and day-use facilities, such as boat launches and picnic areas, will be built but they will only meet 50 percent of the projected demand. Some of these sites may be built and operated by the public sector.

- To provide **dispersed recreation** 42 percent of the unroaded lands will have an undeveloped prescription and 93 percent of the unroaded lands could remain undeveloped at the end of the second decade based on the timber harvest schedule. However, roads may be developed in some areas for access to treat the mountain pine beetle epidemic and for geothermal exploration.

  The **summer trail system** for horses and hikers will be maintained at the present level. Missing sections will be constructed and substandard sections will be reconstructed. A mountain bicycle trail system will be developed. Trails for motorcycles and all terrain vehicles (ATV's) will also be developed. Most of the Forest low-standard roads (those not maintained for passenger cars) will be open to off-road vehicles.

  For **winter recreation** the existing nordic and snowmobile trail system will be maintained and expanded. Snow parks will be constructed to meet increases in demand.

- In the **Oregon Cascade Recreation Area** all existing roads will remain open to motorized use. The road up the Little Deschutes River and to Big Marsh would be improved. The Summit Lake Road would remain in its existing condition. Wildlife habitat could be improved through timber harvesting in the Big Marsh drainage by using the existing road system. Motorized vehicles would be restricted to existing roads and trails in the summer with no restriction on over-the-snow vehicles in winter.

- All State and County highways and many Forest Service roads, including those to major trailheads, are protected for **visual quality.** Most major buttes are also protected, but only part of the area seen west of Davis Lake is protected. The areas south of Mt. Bachelor and most of Pine Mountain are also protected.

* Nonchargeable means the timber removed from regulated forest land does not contribute to meeting the annual sustained-yield capacity.

- Status of the **special interest areas** is shown below.

Name	Status
Lava Butte	Existing
Lava Cast Forest	Existing
Lavacicle Cave	Existing
Wake Butte	Proposed
Castle Rock	Proposed
Katati Butte	Proposed
Hole in the Ground	Proposed
Big Hole	Proposed
Balancing Rock	Proposed
Moffit Butte	Proposed
Horn of the Metolius	Proposed
Hosmer Lake	Proposed

- The **Metolius River** from its source to Bridge 99 would be recommended for classification as a Recreation River under the Wild and Scenic Rivers Act. Low-head hydropower facilities on the Deschutes River would be compatible.

- Important **deer habitat** would be managed to retain 30 to 50 percent of the area in thermal cover. Approximately 25 percent of the mature and decadent shrub communities would be regenerated each decade by prescribed burns. The amount and condition of habitat could provide for mule deer population increases to 27,100.

- Habitat for **cavity dwelling species** would be retained for 60 percent of the maximum biological potential.

- **Old growth** will be present on approximately 14 percent of the forest. Some of this is a result of areas which are not developed or scheduled for timber harvesting. The remainder is a result of establishing 5 percent of the forested plant communities as old growth.

- Geothermal leasing in the **Newberry Crater KGRA** could be permitted outside the Crater but not inside. Geothermal leasing could be permitted in some additional areas on the Forest which are not already under lease.

- Twenty million board feet (60,000 cords) would be made available annually for **personal use firewood.** Should demand continue to increase, the amount per permit could be decreased. Demand could make it necessary to limit the number of permits issued. The price of personal use firewood would trend upward and be re-evaluated each year.

- The following areas would be recommended for inclusion in the **Research Natural Area** program:

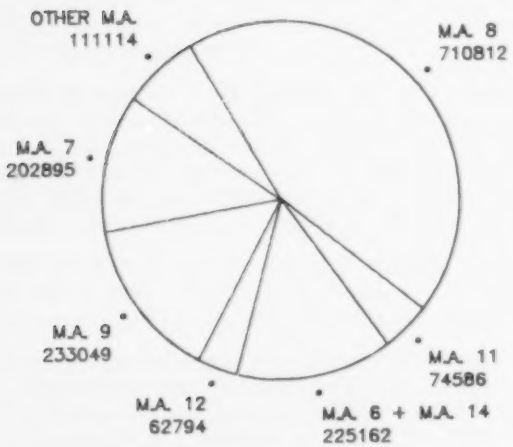
Cache Mountain
Cultus River
Katsuk Butte
Torrey-Charlton
Many Lakes
Wechee Butte
Mokst Butte

- Windigo Pass road and the **Todd Lake to Three Creeks Lake road** would be maintained in their current condition and would not be improved. The same would apply to the Irish-Taylor road. Forest road 5897 (Waldo Lake road) would be improved but would not be developed into a paved highway.

- **Roadless Area Management.** The next table shows how various roadless areas are affected by the management strategies in this Alternative.

Roadless Areas			
Roadless Area	**Developed**	**Partly Developed**	**Undeveloped**
Mt. Jefferson	X		
Metolius Breaks		X	
Three Sisters		X	
West/South Bachelor		X	
Bearwallows	X		
Bend Watershed		X	
Waldo		X	
Charlton		X	
North Paulina	X		
South Paulina	X		
Maiden Peak		X	

ALTERNATIVE F
(acres/management area)



Summary of Results Related to Key Issues

Issue	Result
Timber	
Million cubic feet average annual for the first decade.	43.7
Million board feet average annual for the first decade.	195
Recreation	
Average annual MRVD's of developed recreation.	2,638
Average annual MRVD's of dispersed recreation.	2,418
Planned Campground Construction	50% of Demand
Wildlife	
Potential mule deer population.	27,100
Potential bald eagle population.	45 pairs
Potential osprey population.	80 pairs
Energy	
Thousands of Acres of high potential geothermal areas available for leasing.	97.1
Amount of personal use firewood provided.	60,000 cords
Social/Economic	
Present net value	$ 1125.21 Million
First decade average revenues to the Government.	$ 24.2 Million
First decade average annual returns to the Counties.	$ 6.0 million

Alternative G

The goal of this Alternative is to provide for high levels of amenity values.

This Alternative provides for ecosystem preservation by having significant acres of the roadless areas remain unroaded. Areas available for timber production would be reduced.

A wide range and large amount of recreation opportunities would be provided but emphasis would be on activities that do not require large or sophisticated developed sites such as fishing, tent camping, cross-country skiing, and hiking. Scenic resources would be emphasized along heavily traveled roads and other roads and areas receiving high amounts of recreation use.

Habitat for threatened and endangered plants and wildlife species and old-growth ecosystems would be provided at high levels.

- Of the lands tentatively suitable for timber production, **timber harvesting** is scheduled on 70 percent of them. Lands not programmed were unroaded or generally had low value species and high management costs.

  Timber harvest level would be based on nondeclining yield. Mature and overmature lodgepole pine would be converted to managed stands in 30 years.

  On lands where recreation and visual quality are emphasized, the lands would be classed as nonchargeable.*

- All **developed recreation** campgrounds where a fee is charged will receive Reduced Service Level (RSL) or minimum standard of cleaning and maintenance. All nonfee campgrounds will be closed. All day-use sites will also receive the RSL standard of maintenance.

  No new campgrounds will be constructed. Some new day-use sites associated with nonmotorized activities, such as trailheads leading into the wilderness, will be constructed.

- To provide **dispersed recreation** 85 percent of the unroaded lands will have an undeveloped prescription and 100 percent of the unroaded lands will remain undeveloped at the end of the second decade because of the timber harvest schedule.

  The summer trail system for horses and hikers will be maintained at the present level. Missing sections will be constructed and substandard sections will be reconstructed. A mountain bicycle trail system will be developed. The nordic trail system will also be maintained and expanded. The motorized trail system for snowmobiles, motorcycles, and all-terrain vehicles will be de-emphasized.

- In the **Oregon Cascade Recreation Area** the road up the Little Deschutes River would be closed to motorized use. The road up Big Marsh above Otter Creek would also be closed to motorized use. The Summit Lake Road would remain open and be maintained at its present condition. No timber would be harvested unless it constituted a direct hazard to the users of the area. Motorized vehicles would not be permitted on trails or in any other part of the area in the summer. Over-the-snow vehicles would be permitted in the winter.

- Major acreages in this allocation remain undeveloped and **visual quality** is protected. In those areas available for development, the major State and County highways and the major Forest Service roads are protected. The major buttes are also protected.

- The **Deschutes River,** from Wickiup Reservoir to the Forest boundary to Sunriver, would be recommended as a Recreation River. From there to the north Forest boundary it would be recommended as a Scenic River. The entire length of the **Metolius River** would be recommended for designation as a Recreation River. The **Little Deschutes River,** from its source to the Deschutes, would be recommended as a Recreation River as well as Big Marsh Creek from the Oregon Cascade Recreation Area boundary to Crescent Creek.

* Nonchargeable means the timber removed from regulated forest land does not contribute to meeting the annual sustained-yield capacity.

Low-head hydropower facilities would not be compatible in sections of rivers recommended for classification.

- All **special interest areas** with identified special botanical or geological features not protected would be given protection or interpretation under this Alternative.

Name	Status
Lava Butte	Existing
Lava Cast Forest	Existing
Lavacicle Cave	Existing
Wake Butte	Proposed
Castle Rock	Proposed
Katiti Butte	Proposed
Hole in the Ground	Proposed
Big Hole	Proposed
Balancing Rock	Proposed
Moffit Butte	Proposed
Lava River Cave	Proposed
Hosmer Lake	Proposed

- At least 30 percent of the important **deer habitat** would be maintained in thermal cover. Prescribed burning would not be emphasized. The mule deer population could decline below current levels to 16,700.

- Habitat for **cavity dwelling species** would be provided for at 80 percent of maximum biological potential. Osprey and Bald Eagle populations could increase.

- **Old growth** will be present on approximately 18 percent of the forest. Some of this is a result of areas which are not developed or scheduled for timber harvesting. The remainder is a result of establishing 10 percent of the forested plant communities as old growth.

- Geothermal leasing in the **Newberry Crater KGRA** would not be permitted in the majority of the area. Some small areas around the edge would be available.

  Geothermal leasing in roadless areas could be permitted except in those allocated to Undeveloped Recreation.

- Twenty-five million board feet (75,000 cords) would be made available for **personal use firewood** initially. Should demand change, the amount made available would be adjusted to match demand. Some adjustment in the amount available per individual permit might also be necessary. The price of personal use firewood would trend gradually upward.

- The following areas would be recommended for inclusion in the **Research Natural Area** program:

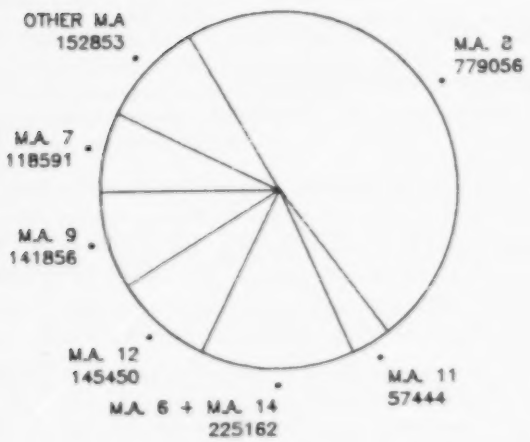
  Cache Mountain
  Cultus River
  Katsuk Butte
  Torrey-Charlton
  Many Lakes
  Wechee Butte
  Mokst Butte

- The **Todd Lake to Three Creeks Lake road** and the Irish-Taylor road would be closed. The Waldo Lake Road and the Windigo Pass road would be maintained in their present condition.

- **Roadless Area Management.** The next table shows how various roadless areas are affected by the management strategies in this Alternative.

Roadless Areas			
Roadless Area	**Developed**	**Partly Developed**	**Undeveloped**
Mt. Jefferson			X
Metolius Breaks			X
Three Sisters			X
West/South Bachelor			X
Bearwallows			X
Bend Watershed			X
Waldo			X
Charlton			X
North Paulina			X
South Paulina			X
Maiden Peak			X

ALTERNATIVE G
(acres/management area)



Summary of Results Related to Key Issues

Issue	Result
Timber	
Million cubic feet average annual for the first decade.	36.8
Million board feet average annual for the first decade.	173
Recreation	
Average annual MRVD's of developed recreation.	2,045
Average annual MRVD's of dispersed recreation.	2,255
Wildlife	
Potential mule deer population.	16,700
Potential bald eagle population.	50 pairs
Potential osprey population.	180 pairs
Energy	
Thousands of Acres of high potential geothermal areas available for leasing.	59.8
Amount of personal use firewood provided.	75,000 cords
Social/Economic	
Present net value	$ 661.3 Million
First decade average revenues to the Government.	$ 23.8 Million
First decade average annual returns to the Counties.	$ 6.0 Million

Alternative H

The goal of this Alternative is to maintain high levels of production from lands that are already developed while retaining much of the roadless land in an undeveloped condition.

Intensive timber management practices could be used, but on less area.

A wide range and large amount of recreation opportunities would be provided, but emphasis would be on activities not requiring large or sophisticated developed sites, such as fishing, tent camping, cross-country skiing, and hiking.

Scenic resources would be emphasized along heavily traveled roads and adjacent to other roads and areas receiving high amounts of recreation use.

Threatened and endangered plants and wildlife species and old-growth ecosystems would be emphasized.

- Of the lands tentatively suitable, 83 percent are used to develop the scheduled timber program. Lands not programmed are generally lower value timber with high management costs.

  Timber harvesting would be scheduled based upon a departure from nondeclining yield.

  Mature lodgepole would be converted in 20 years except where visual resources are provided. Here, 30 years would be used.

  On lands where recreation is emphasized, the lands would be classed as nonchargeable.*

- Fifty percent of **developed recreation** campgrounds where a fee is charged will receive the Full Service Level (FSL) of cleaning and maintenance. The remainder of the fee campgrounds will receive Reduced Service Level (RSL) or a minimum standard of cleaning and maintenance. Half of the nonfee campgrounds will be closed. The other half will receive RSL maintenance. All day-use sites will also receive RSL maintenance.

  No new campgrounds will be constructed. Some day-use sites that emphasize nonmotorized activities will be constructed.

- To provide **dispersed recreation** 72 percent of the unroaded lands will have an undeveloped prescription and 96 percent of the unroaded lands will remain undeveloped at the end of the second decade, based on the timber harvest schedule.

  The summer trail system for horses and hikers will be maintained at the present level. Missing sections will be constructed and substandard sections will be reconstructed. A mountain bicycle trail system will be developed. The nordic trail system will also be maintained and expanded. The motorized trail system for snowmobiles, motorcycles, and all-terrain vehicles will be deemphasized.

- All roads and unroaded areas in the **Oregon Cascade Recreation Area** would be closed to motorized use except Summit Lake Road where snowmobiles in the winter would be permitted. Wildlife habitat improvements would be limited to the immediate Big Marsh area. Livestock grazing would not be permitted.

- Major State and County highways and a few Forest Service roads are protected for **visual quality.** Major buttes and the Metolius Corridor are also protected.

- The **Deschutes River,** from Wickiup Dam to Sunriver, would be recommended for classification as a Recreation River and from Sunriver to the Forest boundary it would be classified as a Scenic River. The **Metolius River** from its source to Lake Billy Chinook would be recommended as a Recreation River. All of the **Little Deschutes River, Big Marsh and Crescent Creeks** would be recommended for a recreation classification.

* Nonchargeable means the timber removed from regulated forest land does not contribute to meeting the annual sustained-yield capacity.

Low-head hydropower facilities would not be compatible in streams and rivers recommended for these classifications.

- All **special interest areas** with identified special botanical or geological features not protected would be given protection or interpretation under this Alternative.

Name	Status
Lava Butte	Existing
Lava Cast Forest	Existing
Lavacicle Cave	Existing
Wake Butte	Proposed
Castle Rock	Proposed
Katati Butte	Proposed
Hole in the Ground	Proposed
Big Hole	Proposed
Balancing Rock	Proposed
Moffit Butte	Proposed
Lava River Cave	Proposed
Hosmer Lake	Proposed

- At least 25 percent of the important **deer habitat** would be maintained in thermal cover. The amount of important habitat and its condition would result in a mule deer population of 13,300.
- Snags would be provided to support 80 percent of the maximum potential population level of **cavity dwelling species.** Bald eagle and osprey populations could increase.
- **Old growth** will be present on approximately 12 percent of the forest. Some of this is a result of areas which are not developed or scheduled for timber harvesting. The remainder is a result of establishing 10 percent of the forested plant communities as old growth.
- Geothermal leasing would not be permitted in a large portion of the **Newberry Crater KGRA.** A small area outside the Crater would be available.

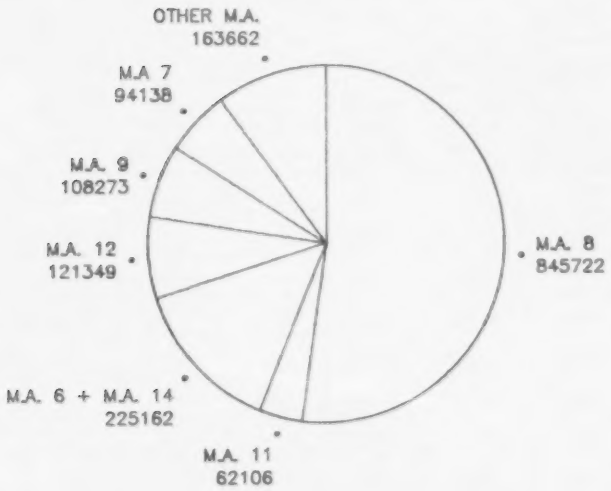
  Geothermal leasing in the rest of the Forest not already under lease would be very limited.
- Twenty-five million board feet (75,000 cords) would be made available for **personal use firewood** initially. Should demand change, the amount made available would be adjusted to match demand. Some adjustment in the amount available per individual permit might also be necessary. The price of personal use firewood would trend gradually upward.
- The following areas would be recommended for inclusion in the **Research Natural Area** programs.

Cache Mountain	Many Lakes
Cultus River	Wechee Butte
Katsuk Butte	Mokst Butte
Torrey-Charlton	

- The **Todd Lake to Three Creeks Lake road** and the Irish-Taylor road would be closed. Forest road 5897 (Waldo Lake road) and Windigo Pass would be maintained in their present condition.
- **Roadless Area Management.** The next table shows how various roadless areas are affected by the management strategies in this alternative.

Summary of Results Related to Key Issues			
Roadless Area	**Developed**	**Partly Developed**	**Undeveloped**
Mt. Jefferson		X	
Metolius Breaks		X	
Three Sisters		X	
West/South Bachelor		X	
Bearwallows		X	
Bend Watershed	X		
Waldo	X		
Charlton			X
North Paulina		X	
South Paulina		X	
Maiden Peak			X

ALTERNATIVE H
(acres/management area)



Summary of Results Related to Key Issues

Issue	Result
Timber	
Million cubic feet average annual for the first decade.	47.1
Million board feet average annual for the first decade.	212
Recreation	
Average annual MRVD's of developed recreation.	2,310
Average annual MRVD's of dispersed recreation.	2,220
Wildlife	
Potential mule deer population.	13,300
Potential bald eagle population.	45 pairs
Potential osprey population.	180 pairs
Energy	
Thousands of Acres of high potential geothermal areas available for leasing.	68.8
Amount of personal use firewood provided.	75,000 cords
Social/Economic	
Present net value	$ 1027.2 Million
First decade average revenues to the Government.	$ 26.3 Million
First decade average annual returns to the Counties.	$ 6.6 Million

SUMMARY OF MAJOR TRADEOFFS BETWEEN ALTERNATIVES

National, Regional, and Local Issues

The management of the Deschutes National Forest has implications for national, regional, and local concerns.

Consequently, the entire Forest Planning process revolves around the development of alternative ways to address identified issues, concerns, and opportunities (ICO's) involving the management of the Forest. However, while all of the identified ICO's are important, only a few of them are really useful for distinguishing significant differences between the alternatives. The following is a brief summary of the eight ICO's that seem to be of greatest significance on the Deschutes National Forest. The tables display one comparison of these ICO's by alternative.

One ICO not displayed in the table but useful in evaluating the differences between the Alternatives is "public acceptance." It is likely that the way some ICO's are addressed in some alternatives will cause some conflict and polarization among different users of the Forest. Therefore, in the following discussions, public acceptance of an alternative will also need to be considered.

Response to Issues, Concerns and Opportunities

Alts.	Decade 1 Firewood Reserved For Personal Use (M Cords)	Dev. Rec. (M Acres)	Undev. Rec. (M Acres)	Visual Quality (M Acres)	OR Dept. F&W Mule Deer Pop. Objectives (24,850 Deer)	Acres of High Potential Geothermal Avail. For Leasing (M Acres)*	Average Annual First Decade Pay-ments to Counties ($MM)	Potential Impact on # of Jobs in Local Economy in 1st Decade (# Changed)
A(CD)	60	8.9	57.4	401.8	20,300	85.9	7.2	0
B(RPA)	60	71.8	61.9	365.0	28,600	91.5	5.5	-258
C	0	105.1	1.4	207.4	32,300	126.1	8.7	+550
D	0	98.8	18.2	358.6	29,800	105.0	5.2	-295
E(Pref.)	60	79.6	94.8	344.6	25,900	100.0	6.8	-21
F	60	74.6	62.8	360.1	27,100	80.3	6.0	-202
G	75	57.4	133.7	426.0	16,700	52.8	6.0	-321
H	75	62.1	121.3	411.9	13,300	62.8	6.6	-84

*For information on the disposition of the Newberry Crater KGRA, the reviewer should read the description in each Alternative.

Response to Issues, Concerns and Opportunities

Alts.	Meets or Exceeds RPA Targets: Dev. Rec. Target (2,050 MRVD)	Disp. Rec. Target (1,930) MRVD)	Range Target (32 MAUM)	Timber Target (41.9 MMCF)	Timber Target (195 MMBF)	Habitat Improve-ment Target (6.4 M Acre Equiv.*	Avg. Annual 1st Decade Revenues To Govt. ($MM)	Avg. Annual 1st Decade Budget ($MM)	Present Net Value ($MM)
A(CD)	2,036	29	39.6	190	6.2	30.0	17.8	741.3	1,837
B(RPA)	2,386	32	42.0	176	6.4	22.5	20.4	1124.1	2,567
C	2,686	45	59.8	265	30.0	36.3	23.5	1285.8	3,493
D	2,551	29	41.3	171	23.5	21.5	20.1	1121.3	2,983
E(Pref.)	2,493	32	46.6	202	27.0	27.1	20.6	1123.4	2,770
F	2,418	29	39.2	174	30.2	25.9	19.1	1125.2	2,638
G	2,255	26	32.5	153	16.0	24.8	16.1	661.3	2,045
H	2,220	32	41.7	187	12.5	27.4	20.4	1027.2	2,310

*Acre Equivalent - A conversion factor applied to the actual acres of wildlife habitat improvement to show that a larger area of habitat was improved rather than just the treated acres.

Can the Forest meet the assigned Resource Planning Act (RPA) Targets?

Based on a National assessment, the RPA planning effort established recreation, range, timber, and wildlife targets for the Deschutes National Forest. The Forest must determine if it is capable of meeting or exceeding the targets within acceptable environmental limits. The respective first decade RPA targets by resource and the alternatives response to them are displayed in the table.

How should the Forest consider local and regional economies, lifestyles, and population levels in managing Forest lands?

The economy and lifestyles of many local and regional communities are tied to the Forest in various ways. Tourists and permanent residents alike are attracted to the wide variety of recreation opportunities available on the Deschutes National Forest. Accordingly, the businesses which serve the needs of recreationists and tourists are becoming, and will continue to be, an increasingly important component of the Central Oregon economy.

The Forest also provides wood for a significant forest products industry in local communities. In addition, since many people use wood as a primary home heating source, personal use firewood cutting has become an important element of the Central Oregon way of life.

Consequences of the alternatives on jobs, income, and payments to counties in lieu of taxes are components of this issue. The first decade impacts on both jobs and payments to counties in lieu of taxes are displayed by alternative in the table.

Many of the other elements of this issue are couched as individual issues which are discussed below. The way each of the following issues is treated has a bearing on this issue. For example, how the mature lodgepole pine is treated in each alternative affects personal use firewood supplies and the amount of raw materials for the forest products industry, which in turn affects the economies and lifestyles of the Central Oregon region.

How should the Forest plan to meet future demands for use of wood as an energy source?

With the combined effects of current levels of personal use firewood consumption, commercial timber sale and firewood contracts, and the mountain pine beetle epidemic, the primary source of accessible firewood supplies as we know it today will be gone in 10 to 15 years. An important element of this issue is the amount of firewood which will be reserved for personal use as opposed to competitive bidding on an annual basis during the first decade. The table displays firewood available by alternative.

How should the Forest provide for present and future developed recreation?

Demand for camping, boating, and other recreation pursuits is continuing to grow, and, could double within the next four to five decades. Two questions need to be addressed—which areas should be managed as developed recreation sites and how many acres should they include. The number of acres managed for developed recreation opportunities by alternative are displayed in the table.

How can the Forest keep pace with expanding demands for dispersed recreation?

Hiking, snowmobiling, hunting, and driving for pleasure are popular dispersed recreational activities. Some occur exclusively in areas of the Forest. Others, such as cross-country skiing and snowmobiling, occur simultaneously in some areas and conflicts can arise. Demand for all could double within the next four to five decades. Where and how much of the Forest to provide for dispersed recreation activities while minimizing conflicts is the heart of this issue. The table displays the number of acres managed for undeveloped recreation opportunities by alternative.

How can the Forest maintain scenic beauty while providing goods and services?

The high recreational values of the Forest are directly linked to its beautiful scenery. The key to this issue is to determine which areas and how many acres should be managed for scenic beauty. The table indicates the amount of visually sensitive areas of the Forest which are managed to maintain or enhance visual quality.

What should wildlife populations be?

The public, the Forest, and the Oregon Department of Fish and Wildlife are particularly concerned about several species: mule deer, elk, and osprey. Other species include goshawks, pine martens, and woodpeckers.

What level of emphasis should the Forest place on maintaining or improving habitat for these species? While all are important, this part of the evaluation will focus on mule deer populations. The Oregon Department of Fish and Wildlife has established a population objective of 24,850 deer. The habitat capability of each alternative to meet this objective is portrayed in the table.

What areas on the Forest should be made available for geothermal leasing and development?

The Forest has some of the greatest potential for geothermal resources of any area in the Western United States. Approximately 350,000 acres have already been leased. The Newberry Crater is a designated Known Geothermal Resource Area (KGRA) but remains unleased. There are also other areas (mostly in roadless areas) on the Forest which could be leased. The main thrust of this issue is where, and under what conditions, should leases be issued and how should recreation, visual, wildlife, water quality, and other resource values be protected. The table displays by alternative the number of high potential acres available for leasing.

Tradeoffs and Comparisons Between Alternatives

The following paragraphs summarize the tradeoffs between the Alternatives as displayed in the tables.

Alternative A (Current Direction)

Of the eight alternatives, Alternative A ranks seventh in present net value ($741.3 million). Its low PNV ranking is due to the fact that of all the alternatives, the recreation benefits generated by Alternative A are the lowest. The existing management plan for expanding intensive recreation capacity is quite restrictive. This limited capacity for expansion put a ceiling on the amount of developed recreation consumption the Forest could provide.

In addition to its relatively low present net value, Alternative A also fails to meet the developed recreation, range, and timber-related RPA targets. Despite this, it results in the second highest payments to counties because of its rich ponderosa pine and mixed conifer species in the first decade. It also requires the second lowest funding levels of all the alternatives.

In addition to ranking fifth in terms of acres available for geothermal leasing opportunities, Alternative A also does not recognize the Newberry Crater as a Known Geothermal Resource Area.

Implementation of this Alternative implies maintaining the economic status quo during the first decade, although future decades would witness changes. Alternative A ranks third in the amount of acres it proposes to manage for scenic quality. On the other hand, Alternative A is the sixth lowest of all the alternatives in projected mule deer populations, and fails to meet the State's population targets for this species. It also ranks relatively low in terms of the amount of unroaded recreation and the amount of developed recreation which it provides, thus restricting the diversity of the recreation opportunity spectrum.

Alternative B - RPA

The PNV for Alternative B is $1121.3 million. Alternative B uses departure harvest schedule.

Alternative B meets or exceeds all of the RPA targets. In doing so, it returns $5.5 million to local county governments (seventh highest), and incurs the third highest budget.

While its recreation diversity is similar to Alternative F, Alternative B is more favorable in its flexibility with regard to geothermal leasing. However, its proposed leasing within the Newberry Crater may cause some polarization.

Because Alternative B converts 208,000 acres of lodgepole over 15 years, the substitution of the resulting volume for the more labor intensive ponderosa and mixed conifer tree sizes may cause more downward pressure on the employment base in the local economy.

Alternative C

Of all the alternatives, Alternative C has the highest PNV at $1285.8 million. Alternative C emphasizes the production of priced resources. It permits harvest scheduling based on departure from nondeclining yield.

Alternative C exceeds all of the range, recreation, timber, and wildlife RPA targets. In doing so, it generates the largest amount of first decade revenues to both federal and local governments of any of the Alternatives. However, this is not without a cost. Alternative C requires the highest budget of all the Alternatives (32 percent more than current funding levels).

Alternative C also has a strong emphasis for developed recreation benefits. It assigns the most acreage of any alternative to the provision of developed recreation opportunities. However, it provides the least opportunities to meet future needs for dispersed roaded and unroaded recreation.

Alternative C is the most favorable alternative from a geothermal leasing and development standpoint.

Of all the alternatives, Alternative C provides the most opportunity for increases in the mule deer population. This could be translated into more hunting days in the future and, therefore, more hunter expenditures in the local economy.

Alternative C is the strongest Alternative in terms of providing timber and recreation outputs necessary to support the local employment base and to provide opportunity for growth in the future should the demand for forest-based resources continue to increase.

Benefits such as visual quality, recreation diversity, and easy access to personal use firewood will be at lower standards than they are today.

Despite its strong economic performance, Alternative C may lead to some conflicts and polarization among local communities and other users of the Forest because of its strong commodity development emphasis.

Alternative D

Alternative D has the fifth highest PNV of all the alternatives ($1121.3 million). Alternative D schedules timber harvesting on a non-occurring, even flow basis.

While Alternative D meets or exceeds the recreation and wildlife RPA targets, it falls short on timber and range provisions. Consequently, it ranks seventh in terms of its returns to government (down 40 percent from current returns to government). It ranks fifth in budgetary requirements.

Alternative D has a relatively strong emphasis toward developed recreation at the expense of dispersed recreation opportunities—particularly unroaded nonwilderness.

On geothermal leasing opportunities, Alternative D makes available 105,000 acres and is second only to Alternative C.

Alternative D reserves no lodgepole pine for personal use firewood collection. This means the personal use firewood collector will be competing with the commercial firewood purchasers for this resource and probably will have to pay prices commensurate with true market values. This alternative will also result in more restricted wood processing related job opportunities in the local communities. Alternative D captures some of the more important sensitive scenic areas through its allocation of land to the Intensive Recreation and Scenic View Management Areas. Finally, it provides enough mule deer habitat to exceed Oregon Department of Fish and Wildlife population targets.

Alternative E (Preferred)

At $1123.4 million, Alternative E has the fourth highest PNV of all alternatives. Alternative E harvests timber on a departure from nondeclining yield basis.

Because of its departure harvest schedule, Alternative E meets or exceeds all RPA targets. In doing so, it generates the third highest revenues to both federal and local governments. However, it also requires the second highest budget (16 percent higher than current funding levels).

Alternative E, like Alternatives B and F, offers a diverse spectrum of recreation opportunities. It is somewhat stronger in its attempt to provide for unroaded nonwilderness experiences, which is becoming one of the limited opportunities on this Forest.

It is the third highest in the amount of acres it permits for geothermal leasing, behind Alternatives C and D.

In nonpriced benefits, Alternative E would maintain the firewood burning aspect of the Central Oregon lifestyle by setting aside 60,000 cords of personal use firewood per year in the first

decade. Compared to Alternative B, Alternative E offers slightly fewer benefits pertaining to visual quality. However, it exceeds both the State's targets and Alternative B's output levels for projected mule deer populations. Finally, due to its relatively high first-decade timber sale levels, Alternative E provides the resource base to maintain the Central Oregon economy.

Alternative F

At $1125.2 million, Alternative F has the second highest PNV of the alternatives. Alternative F proposes to harvest timber on a nondeclining yield basis. It has more emphasis (than Alternative C) on the visual resource in sensitive scenic areas. It also places more emphasis on unroaded nonwilderness recreation and less on developed recreation than does Alternative C.

Alternative F converts 196,000 acres of lodgepole pine over 20 years. It offers relatively high volumes of ponderosa pine which tend to have better returns per dollar invested. Of all the alternatives, Alternative F has the second to lowest timber management, road construction, and organizational support costs.

Alternative F falls short of both its range and timber RPA targets. It ranks fourth in terms of cash returns to the government (down 16 percent from current revenues).

While Alternative F provides less developed recreation opportunities than Alternative C, it does offer a more diverse recreation opportunity spectrum through its increased emphasis of dispersed recreation.

Alternative F is considered restrictive in the amount of high potential geothermal acres it opens up for leasing.

Alternative F may result in some slight downward pressure on employment opportunities primarily due to its substitution of lodgepole pine for the more labor intensive mixed conifer species. On the other hand, it sets aside 60,000 cords of personal use firewood per year which is a plus with regard to maintaining that aspect of the Central Oregon lifestyle. Visual quality benefits are much higher than Alternative C and only a little lower than the Current Direction (Alternative A). Finally, it exceeds the Oregon Department of Fish and Wildlife population targets for deer.

It is anticipated that Alternative F would not cause any significant conflicts or polarization within local communities and other users of the Forest if it were selected as the Preferred Alternative.

Alternative G

At $661.3 million, Alternative G has the lowest PNV of all alternatives. The timber benefits are low because Alternative G offers the lowest first decade timber sale program. The recreation benefits are low because of its relatively low capacity to provide for developed recreation opportunities, and the less than standard quality of recreation opportunities which it is budgeted to manage for.

Alternative G falls short of the range, developed recreation, and timber RPA targets. Yet, its returns to federal and local governments are higher than those of both Alternatives B and D. It is the only Alternative which proposes a budget lower than current funding levels (a decrease of 10 percent).

Alternative G is the most restrictive of all the alternatives in providing opportunities for the leasing and possible future development of geothermal resources on the Forest.

It is also rather limiting in prividing opportunities to meet future needs for developed types of recreation activities. Both of these are the result of its strong emphasis toward dispersed recreation and the maintenance of roadless areas in an undeveloped condition. This may lead to some conflict and polarization among local communities and other users of the Forest.

Its implementation could result in the most downward pressure on job opportunities and

income levels in the local economy. This is primarily due to its low timber sale program. On the other hand, it ranks highest in terms of the amount of personal use firewood available to the citizens of Central Oregon. It also ranks highest in maintaining and enhancing visual quality and providing unroaded nonwilderness recreation opportunities. However, Alternative G falls short of Oregon's mule deer population targets, proposing lower population levels in the future than currently exist.

Alternative H

Alternative H has a PNV of $1027.2 million. Alternative H schedules the harvesting of timber on a departure from nondeclining yield basis in order to maintain current harvest levels. Recreation benefits decrease primarily because of provisions to limited capacity for meeting projected future developed recreation needs.

Alternative H meets all of the RPA targets except timber, where it just barely falls short. Alternative H returns the third highest revenues to federal and local governments in the first decade. However, it also requires the third highest budget.

Alternative H offers the second highest emphasis of undeveloped recreation of all the alternatives, but only at the expense of a rather limiting capacity for future developed recreation needs.

Alternative H is also the second most restrictive alternative in promoting the leasing and future development of the Forests geothermal resources.

Because of its relatively stable first-decade timber outputs, it causes only a modest downward pressure on the local timber employment base. It also proposes setting aside 75,000 cords of personal use firewood per year which is a plus for maintaining the current lifestyles of Central Oregonians. In addition, it is second in its emphasis toward maintaining and enhancing visual quality on the Forest. On the negative side, it is last in terms of its projected mule deer populations and, as a result, fails to meet Oregon's population objectives for this species.

EFFECTS

Effects That Do Not Vary Significantly Among Alternatives or Resources

Cultural Resources - Timber harvesting and road construction activities have the greatest potential for disturbing cultural resources. In the short term (next 20 years), Alternative C affects the most acres and Alternative G the fewest. All of the other alternatives lie within a relatively narrow mid-range in terms of their potential disturbance to cultural resources.

Cultural resources will be protected in all alternatives through the application of standards and guidelines which apply to all management activities with the potential to disturb inventoried sites. This will include a professionally supervised inventory program, an evaluation of all inventoried sites, and the mitigation of all sites that may be impacted by ground disturbing activities.

Caves - The Forest has a large number of lava tubes and caves. The protection and management of these caves will be the same in all Alternatives. Potential impact will be commensurate with the amount of acres that are being accessed and developed by the timber program.

In the short term, mitigation measures would include avoiding disturbing activities at the entrance of caves and in the long term would include blocking cave entrances and interpreting caves.

Soil and Water - Like cultural resources, the potential impacts to the soil and water resources are based on the amount of land disturbing activities (timber harvesting, road construction, prescribed burning) proposed in each Alternative.

The potential for impacts to water quality and soil productivity will be evaluated on a project-by-project basis to indicate short-term effects and the potential for significant, long-term, cumulative effects of past and proposed projects within the drainage.

Soil productivity and water quality will be protected in all alternatives through the application of standards and guidelines which apply to all management activities.

Examples of mitigation measures include directional falling of timber to protect channel stability, uneven-age management of timber in streamside zones to provide needed shade, and proper road drainage to prevent excessive road runoff and erosion.

Threatened and Endangered Habitat (Plant and animal) -Existing habitat for threatened and endangered species of animals and plants is protected in all alternatives through the application of either standards and guidelines or appropriate management prescriptions. All alternatives meet or exceed bald eagle management goals as defined by the Interim Bald Eagle Recovery Plan and all alternatives meet the spotted owl objectives. If habitat for peregrine falcons or wolverines is confirmed, it will be protected through the application of appropriate standards and guidelines. Sensitive plant habitat is also protected equally in all alternatives. Types of mitigation actions in the short term could include avoiding habitats for threatened or endangered plants and animals, seasonal restrictions, or the development of prescriptions to improve long-term conditions.

Pesticides - The Forest Service is currently enjoined from using any chemical pesticides as a result of a court decision on the Regional Environmental Statement on herbicide use. That document is being revised and any chemical pesticide use on the Forest which would include big game repellent (BGR), gopher control (strychnine alkaloid), various herbicides and insecticides will be governed by an approved Regional EIS on pesticide use. Only the magnitude of pesticide use will vary between alternatives in direct proportion to the amount and intensity of timber management activities.

Fire - In each alternative, all wildfires will be suppressed. Alternatives that have highe proposed levels of timber harvesting and prescribed burning to improve wildlife habitat wi have correspondingly lower long-term fire hazards through the reduction of fuels. Howeve the potential incidences of fires getting out of control may increase in the short term sinc weather conditions influencing fire control are not 100 percent predictable.

Air Quality - Other than prescribed burning, the temporary emission sources from fores management are not considered significant. The Forest will comply with all applicable a quality laws and regulations and coordinate with appropriate regulatory agencies. All Federa and State air quality standards will be adhered to in all alternatives. Smoke from prescribe burns on the Forest is the most controllable variable affecting air quality. Burning would b done under atmospheric conditions that encourage the dispersal of smoke and that woul help avoid air quality degradation due to smoke in populated areas. Occasional short-ter pollution may occur for a few days since weather conditions are not 100 percent predictabl Alternatives which propose more timber harvesting will tend to have more short-ter incidences of reduced visibility. However, in the long term, continual increased utilization o wood fiber will ultimately have the effect of reducing air pollution from prescribed fires.

Dust created from vehicle traffic on roads can also contribute to poor air quality. It can b mitigated by putting water on the roads.

Prime Farmlands - There are no prime farmlands within or adjacent to the Forest. Water fro the Forest is used to irrigate pasture and farmland in Central Oregon but none of th Alternatives significantly affects the quality or quantity of water.

Wetlands and Floodplains - There are very few acres of wetlands on the Forest. Wetlands an floodplains are protected equally in all alternatives through the application of standards an guidelines designed to maintain infiltration capacity of floodplains and to provide for rapi treatment of slash in floodplain areas.

Noise - Noise is not a significant environmental factor in any of the alternatives. Most nois would be associated with timber harvesting and would be localized and not continuous. In th long term, increases in noise could be associated with geothermal resources (within a ha mile).

Noises are associated with recreational vehicle and motorboat use where that use occurs in concentrated area.

Minerals - The potential for locatable minerals on the Forest is very low. Any environment consequences would be localized and would be confined to soil disturbance and changes visual quality. Any minerals removed would be an irreversible loss of resources.

Effects on Resources That Do Vary Among Alternatives

Timber Management

General Activities

Timber management is comprised of a number of related silvicultural activities associated with the establishment, tending, harvesting and marketing of wood products from the National Forest. It is the primary method of manipulating the vegetative resources on the Forest to achieve the desired management objectives for timber, range, recreation, wildlife, and visual resources.

Silvicultural activities which affect the environment include site preparation, reforestation, plantation protection against animal damage, timber stand improvement including modification of competitive vegetation and thinning, and the harvesting of timber crops. Other activities associated with the management of timbered stands include road construction and maintenance, logging operations, and the removal of residual fuels resulting from harvesting activities.

The magnitude of the effects, both short term and long term, and direct and indirect depends on the type of activities prescribed and the number of acres to which they are applied. All vegetative management activities are implemented in accordance with the prescriptions and the standards and guidelines detailed in the Forest Plan.

Most silvicultural practices on the Forest are implemented with the intent to perpetuate growth and development of even-aged stands of timber, although in some cases the management of uneven-aged stands is also appropriate.

Consequences on Alternatives

Timber management and other associated activities occur in each alternative. However, the amount of activities prescribed and their consequential environmental effects vary from one alternative to another.

The accompanying tables display for each alternative the average annual acres of timber harvesting and miles of road construction. While this is not the total picture as far as timber management-related activities are concerned, it provides a good comparison of the relative potential magnitudes of environmental consequences that may result from the implementation of any one alternative. In the first decade, Alternative C proposes to impact the largest amount of land while Alternative A affects the least. In the second decade, and on through the fifth, Alternative G has the lowest potential to impact acres with vegetative management activities.

Average Annual Acres of Timber Harvesting and Miles of Road Construction by Alternative

Alternative	(Planned) Decade 1[1]			(Potential) Decade 2			(Potential) Decade 5[2]		
	Timber Harvesting		Road	Timber Harvesting		Road	Timber Harvesting		Road
	Regen. Harvest (M Acres)	C'mercial Thinning (M Acres)	Const'n & Reconstr. (Miles)	Regen. Harvest (M Acres)	C'mercial Thinning (M Acres)	Const'n & Reconstr. (Miles)	Regen. Harvest (M Acres)	C'mercial Thinning (M Acres)	Const'n & Reconstr. (Miles)
A (Cur.Dir.)	13.3	3.2	57	17.3	5.2	45	9.8	8.2	30
B	20.6	3.9	53	13.8	4.7	55	11.6	10.8	45
C	24.8	4.4	77	17.3	4.4	82	11.6	11.6	62
D	19.5	3.8	51	13.8	4.7	55	10.6	11.4	47
E	21.3	4.1	60	15.3	4.5	57	11.1	11.8	47
F	17.6	3.7	52	14.2	4.5	48	10.3	9.0	39
G	14.4	2.8	46	11.9	4.5	38	8.2	9.5	26
H	17.9	5.2	54	15.9	5.5	44	10.7	15.9	32

[1]First decade basically represents the life of a Plan for any alternative.

[2]The fifth decade represents the potential if an alternative were continued for 5 decades.

The number of acres impacted in each alternative is primarily a function of (1) the amount of volume offered for sale in each decade; (2) the rate at which mature and overmature lodgepole pine stands are converted to young-managed stands in order to alleviate future losses to the mountain pine beetle epidemic; and (3) the proportionate share of the allowable sale quantity that is comprised of thinning volumes.

Alternative C offers the highest allowable sale quantities while Alternative G offers the least over the first two decades. It is also apparent that Alternative C proposes to convert more lodgepole pine over the next two decades than any other alternative, while Alternative G converts the least. In the short term, these two factors account for Alternative A (Current Direction) impacting more land with timber management and road construction and maintenance activities than any other alternative, while Alternative G impacts the least. All of the other Alternatives fall somewhere in between.

Summary of Roadless Area Development by Alternative

	Cur.Dir. Alt. A	RPA Alt. B	Alt. C	Alt. D	Preferred Alt. E	Alt. F	Alt. G	Alt. H
Total Unroaded Acres	145,142	145,142	145,142	145,142	145,142	145,142	145,142	145,142
Acres Available for Development	79,872	85,474	139,718	124,156	100,088	83,349	21,705	40,683
Acres Unavailable for Development[1]	65,270	59,668	5,424	20,986	45,054	61,793	123,437	104,459
Acres Available for Winter Recreation/ Geothermal[2]	0	14,202	23,269	8,992	18,262	5,589	0	4,469
Acres of Timber Harvest:[3]								
Decade 1[4]	Depends on Mountain Pine Beetle Epidemic						0	0
Decade 2	217	2,592	20,109	5,711	5,632	4,711	0	1,141
Decade 3	7,988	0	143	0	9,898	82	0	4,192
Decade 4	1,184	639	17,799	1,353	4,702	1,778	640	2,007
Decade 5[5]	3,131	10,363	29,958	15,868	14,719	9,453	1,981	4,507
Cumulative Miles of Road Construction by:[6]								
Decade 1	Depends on Mountain Pine Beetle Epidemic						0.0	0.0
Decade 2	2.2	25.9	200.1	57.1	56.3	47.1	0.0	11.4
Decade 5	125.2	135.9	680.1	229.3	349.5	160.2	26.2	118.5
Acres Remaining Undeveloped After:[7]								
Decade 1	145,142	145,142	145,142	145,142	145,142	145,142	145,142	145,142
Decade 2	144,925	142,550	125,033	139,431	139,510	140,431	145,142	144,001
Decade 5	132,622	131,548	77,133	122,210	110,191	129,118	142,142	133,295

[1]Includes management strategies which primarily exclude roading such as Research Natural Areas, some forms of undeveloped recreation, and the Bend Municipal Watershed.

[2]The acres assigned to the winter recreation and geothermal strategy are available for roading but it is difficult to predict when that would occur since it is dependent on leasing and exploration. Some exploration could be expected in the first decade but it is impossible to say how much and where.

[3]The acres scheduled for timber harvest would also have associated roads so that total acres impacted would be somewhat higher than shown above.

[4]First decade basically represents the life of a plan for any alternative.

[5]The fifth decade represents the potential if an alternative were continued for five decades.

[6]Based on a coefficient of .01 miles of collector and local roads per acre harvested. The unpredictable impacts of geothermal exploration and development are not included.

[7]Includes only the impacts of scheduled timber harvesting. Does not consider geothermal exploration or some development that might occur because of the mountain pine beetle epidemic in lodgepole pine.

Range

General Activities

Activities include water development, prescribed burning, fence construction, and grass seeding.

Consequences of Alternatives

Alternatives B (RPA), C, E (Preferred), and H meet the RPA Program and increase from present levels. Alternatives A, D, and F maintain grazing at present levels. Alternative G decreases from present levels.

In those Alternatives where high grazing levels are proposed, more acres will be affected. No Alternatives have a grazing level high enough to create a significant problem.

Recreation

General Activities

Recreation management includes activities such as operation and expansion of existing recreation facilities (campgrounds, boat ramps, trails, signs, ski areas, and parking lots and interpretive centers), construction of new facilities, providing access to National Forest land and water, and protecting visual resources.

Consequences of Alternatives

Opportunities to enjoy various types of developed and dispersed recreation vary significantly among alternatives.

Developed recreation opportunities would increase in some alternatives through the construction of new recreation facilities. Day-use facilities are emphasized in some alternatives while more overnight campgrounds would be developed in others. Alternative C provides the most new overnight campgrounds and encourages growth and demand. Alternative D emphasizes day use rather than campground use. Alternatives B, E (Preferred), and F would develop enough campground to meet long-term demands. Alternatives G and H would not meet this long-term demand for developed recreation because they do not provide for enough new developed recreation sites and facilities.

Number of Campground Units Constructed Per Year (Decade 1)

	Alternative							
	(CD) A	(RPA) B	C	D	(Pref.) E	F	G	H
Units	15	65	75	0	65	65	0	0

Dispersed recreation opportunities would substantially exceed demand in all alternatives. Those recreation opportunities associated with roads or those that occur in Roaded, Modified and the Roaded-Natural ROS zone will be particularly plentiful. This includes hunting, hunter camps, fishing, ORV use, Nordic skiing, hiking dispersed camping, etc.

Opportunities for dispersed recreation in Unroaded areas or those that occur in the semiprimitive nonmotorized ROS zone will be significantly affected by all Alternatives.

Alternative C would restrict such recreation opportunities to existing wilderness and parts of the Oregon Cascade Recreation Area (OCRA). Alternative D would provide more opportunity for dispersed recreation in roadless areas than Alternative C, but people would still rely primarily on Wilderness and the OCRA. Both C and D, however, would not meet long-term needs for Semiprimitive Nonmotorized recreation. Alternatives B (RPA), E (Preferred), and F provide more opportunities than C and D due to the larger amount of land that would remain roadless. Alternatives G and H provide the most opportunities for dispersed recreation in unroaded areas.

Scenic Quality

General Activities

The objectives of managing for visual quality is to protect the scenic quality of uncommon or outstanding landscapes. Where visual quality objectives (VQO's) are restrictive, they limit the latitude of activities that can be conducted within these areas.

Consequences of Alternatives

Scenic quality is managed differently in various alternatives. In Alternative C, only the major highways and buttes would be managed for visual quality. Views of human activity, primarily logging, would dominate the landscape. Logging areas and roads would be visible from viewpoints and recreation sites. Due to the accelerated treatment of mature lodgepole pine, some large clearcuts would be visible.

Alternative D emphasizes visual quality. Views of human activities would not be evident from roads and recreation areas because logging would be screened by trees. Important roads, trails, and buttes would be managed to protect or enhance their visual qualities, except where mature lodgepole pine occurs. Treatment of the lodgepole pine would be noticeable because stumps and slash piles would be visible over the short term.

Alternatives F, B (RPA), and E (Preferred) provide different levels of emphasis on visual quality but the majority of the roads, buttes, and recreation areas would be managed to protect or enhance visual quality. Treatment of lodgepole pine would be evident over the short term along major roads and in some recreation areas. Stumps and small amounts of logging slash would be visible until new trees grow.

Alternative G protects most roads and trails to enhance visual quality. Treatment of the lodgepole pine would be less noticeable since treatment would extend over a 30-year period.

Alternative H protects or enhances the important visual areas on the west side of the Forest. Visual impacts from treating lodgepole pine would not be as harsh as in the other Alternatives because treatment would extend over a 30-year period.

Wilderness

General Activities

Activities include planning, public education, administration, and management to protect the natural conditions, maintain trails and signs, and remove garbage and litter.

Consequences of Alternatives

Because Wilderness is specifically designated by Congress, the number of acres remains the same in all Alternatives.

Wildlife

General Activities

General activities include prescribed burning, management of trees and other vegetation to provide for wildlife habitat needs and for fish habitat improvement.

Consequences of Alternatives

The effects of the Alternatives on big-game habitat could determine the long-term population levels for deer. Current Direction (Alternative A) provides for 20,300 deer. Alternatives B (RPA), C, E (Preferred), and F could increase mule deer populations while Alternative D would provide habitat to maintain populations near present levels. Alternatives G and H would reduce deer populations below present levels. The population predictions are based on the amount of transition and winter ranges on which optimum habitat conditions are provided.

Thermal cover, which is provided by dense stands of trees, would improve in Alternatives C, D, E (Preferred), and F in the long term on winter and transition ranges but would not under Current Direction (A) or in Alternatives G and H. The relationship of thermal cover and feeding areas would be optimized in Alternatives B (RPA), C, D, E (Preferred), and F, but not in Alternatives G and H. Feeding areas would be improved in the short and long term in Alternatives B (RPA), C, D, E (Preferred), and F by burning the older shrubs and replacing them with grasses and forbs.

Osprey habitat falls into two basic categories: (1) good habitat which is nest trees located within one-quarter mile of water and (2) marginal habitat which is nest trees located from one-quarter to five miles from water. Under Current Direction (Alternative A) both good and marginal habitats are being protected, resulting in a gradual increase in osprey numbers on the Forest. Some of the good nesting habitat is disappearing, however, due to the natural loss of nesting sites at Crane Prairie Reservoir. Installation of artificial nest structures could mitigate this situation. Alternatives B, C, E, and F do not protect the marginal nesting habitat, so osprey populations could be expected to decline in the long term. Alternatives D, G, and H protect both marginal and good habitat, so osprey populations could be expected to continue to increase.

Pine marten habitat will decline in the short term in all Alternatives. They occupy mature lodgepole pine which is being reduced because of the mountain pine beetle epidemic. This habitat will be lost whether or not lodgepole pine is salvaged. Alternatives C and D would reduce habitat, in the long term, to the bare minimum for retaining viable populations of martens. Alternatives A, B, and E would have long term reductions in habitat while, in the long term, Alternatives G and H would retain marten populations near present levels.

Geothermal

General Activities

The program objective for the geothermal resource is to provide opportunity for exploration and development in a manner compatible with other resources. Exploration and development is carried out largely by private companies under the Federal leasing program. The Bureau of Land Management (BLM) administers the leasing program; however, the Forest Service reviews lease applications, consents to leasing and to the conditions of leases. As the surface managing agency the Forest Service also reviews operating plans, makes input to site specific Environmental Analysis and is a co-signer of operating plans approved by the BLM. The type of activities involved in exploring for and developing the resource are shown in the accompanying table.

Types of Activities Involved in Geothermal Exploration and Development

Process Steps	Activity
Leasing	Environmental analysis and lease recommendations.
Preliminary Exploration	Geologic mapping, electronic surveys, temperature gradient drilling.
Exploration Drilling	Road and drill pad construction, drilling test wells, flow testing wells, abandoning (closing) unsucessful wells, and rehabilitating disturbed areas.
Field Development	Road and drill pad construction, drilling several wells, flow testing wells.
Plant Construction	Further road and drill pad and Production construction, drill additional wells, constructing the generating plant, pipelines and powerlines, and revegetating disturbed areas.
Reclamation	Remove buildings, pipelines, etc., abandon (close) wells, and revegetate for other resource use.

Although potential for the geothermal resource appears high there is a great deal of uncertainty and speculation in the exploration process. Exploration of any particular block of leases proceeds a step at a time and enters the next step only if the results are positive and justify additional expenditure for further exploration. Experience indicates that only a small percentage of the leases are drilled and an even smaller percentage result in a discovery and are developed. Activity on most of the leases will not proceed beyond the preliminary exploration stage.

Consequences of Alternatives

The opportunity to explore for and develop the resource is a function of the amount of area and the quality of the resource potential available for leasing. In this respect the alternatives differ in the amount and quality of areas available for leasing. The next table compares the amount of acres available for leasing by the resource potential classification for each alternative. Most attention should be given to the high and medium categories of resource potential.

Acres Available for Geothermal Leasing

Potential	Alternative							
	A (CD)	B (RPA)	C	D	E (Perf)	F	G	H
High	85,900	91,500	126,100	105,000	100,000	80,300	52,800	62,800
Med.	484,000	461,000	486,500	483,100	468,800	461,000	436,300	444,200
Low	402,000	400,100	410,000	410,000	400,100	402,800	399,400	400,000
Unknown	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
TOTAL	944,900	952,600	1022,500	998,100	968,900	944,100	888,500	907,000

Probable Adverse Environmental Impacts That Cannot Be Avoided

1. Soil would be displaced as a result of timber sales, slash treatment, and construction of roads, trails, and recreation facilities. Overall, soil productivity would be maintained except for sites dedicated to roads, landings, recreation sites, and other facilities or uses which compact the soil or occupy a site.
2. Air quality may be temporarily degraded in localized areas as a result of prescribed fires.
3. Short-term degradation of visual quality in recreation and scenic areas would occur as a result of harvesting mountain pine beetle infested lodgepole pine.
4. Areas suitable for undeveloped recreation (ROS categories of semiprimitive nonmotorized, or semiprimitive motorized) could become unsuitable for this type of recreation experience if they are allocated to other land uses. Management prescriptions (practices) scheduled for these other land uses could permanently destroy or temporarily modify attributes, making them suitable for undeveloped recreation (i.e., building roads; changing land form; or changing vegetation arrangement, species composition, or age class mix).

Irreversible or Irretrievable Commitment of Resources

Acres committed to facilities and roads constitute an irretrievable loss of vegetative production. Land committed to major roads and facilities could be considered an irreversible effect.

Roadless areas committed to development, once developed, would no longer be suitable to Wilderness classification.

Use of mineral resources such as cinders and gravel has both irretrievable and irreversible effects.

Short-Term Use and Long-Term Productivity

In the long term, development of geothermal resource may be irretrievable because the heat source would be exhausted.

Coordination With Other Agencies and Local, County, State, Federal Governments

Coordination with other agencies occurred throughout the planning process. The major local, County, State, and Federal agencies contacted include the City of Bend; Deschutes and Jefferson Counties; the Confederated Tribes of the Warm Springs Reservation; Oregon Department of Fish and Wildlife; Fish and Wildlife Service, Endangered Species Branch, U.S. Department of the Interior; and the Bureau of Land Management. The Preferred Alternative does not conflict with objectives of the aforementioned agencies with the exception of the State's Forestry Program for Oregon. Alternative C meets their objectives but the Preferred Alternative (E) is below the wood outputs projected by their plan.

YOUR TURN

HOW YOU CAN HELP

Since the National Forests are managed to benefit all of us, it is important that you and other members of the public give us your ideas on how you think National Forests should be managed.

The Draft Environmental Impact Statement and Draft Forest Plan describe the Deschutes National Forest and display a variety of alternative ways to manage it. This period of public review of these documents is your opportunity to analyze the alternatives and share your comments.

THE DECISIONMAKING PROCESS

When the public review period ends, the responses will be analyzed. The Forest Supervisor and Regional Forester will review and evaluate the analysis of those responses and use the analyses of the public input — along with other factors, including legal constraints, resource capability, resource protection, economic stability, etc., — to decide on the final forest plan.

The final plan will be described in the Final Environmental Impact Statement and in the Forest Plan document. It will display how the public input was used and how decision criteria were applied in developing the final Forest Plan.

THE RESPONSE FORM

In the pocket inside the back cover is a response form, which may help you in sending us your comments. There are ideas and hints on the response form which may be useful as you develop your comments.

If you disregard the response form, send us your comments in any format you find suitable. Even verbal comments are appreciated. Contact the Forest Public Affairs Officer or the Planning Team Leader and they will help you document your verbal comments.

For the Deschutes National Forest, these contacts are:

Public Affairs Officer
Greg McClarren
Phone: 388-8561

Planning Team Leader
Larry Mullen
Phone: 388-8568

Individual comments are the most important input we can receive. Your interests, desires, and needs — expressed in comments on the alternatives — are critical in helping us analyze all of the input. Input received in form letters and petitions is not nearly as useful as individual comments.

INFORMATIONAL MEETINGS

A number of informational meetings are being scheduled during the public review period on the Draft Environmental Impact Statement. Here is a list of meeting places. Times and exact locations will be announced later.

Bend, Oregon

Crescent, Oregon

LaPine, Oregon

Eugene, Oregon

Sisters, Oregon

Camp Sherman, Oregon

Redmond, Oregon

In addition, if your organization would like a presentation or informal discussion on the Draft Environmental Impact Statement, contact either the Forest Public Affairs Officer or the Forest Planning Team Leader to schedule an appropriate time.

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United States
Department of
Agriculture

Forest Service

Pacific
Northwest
Region

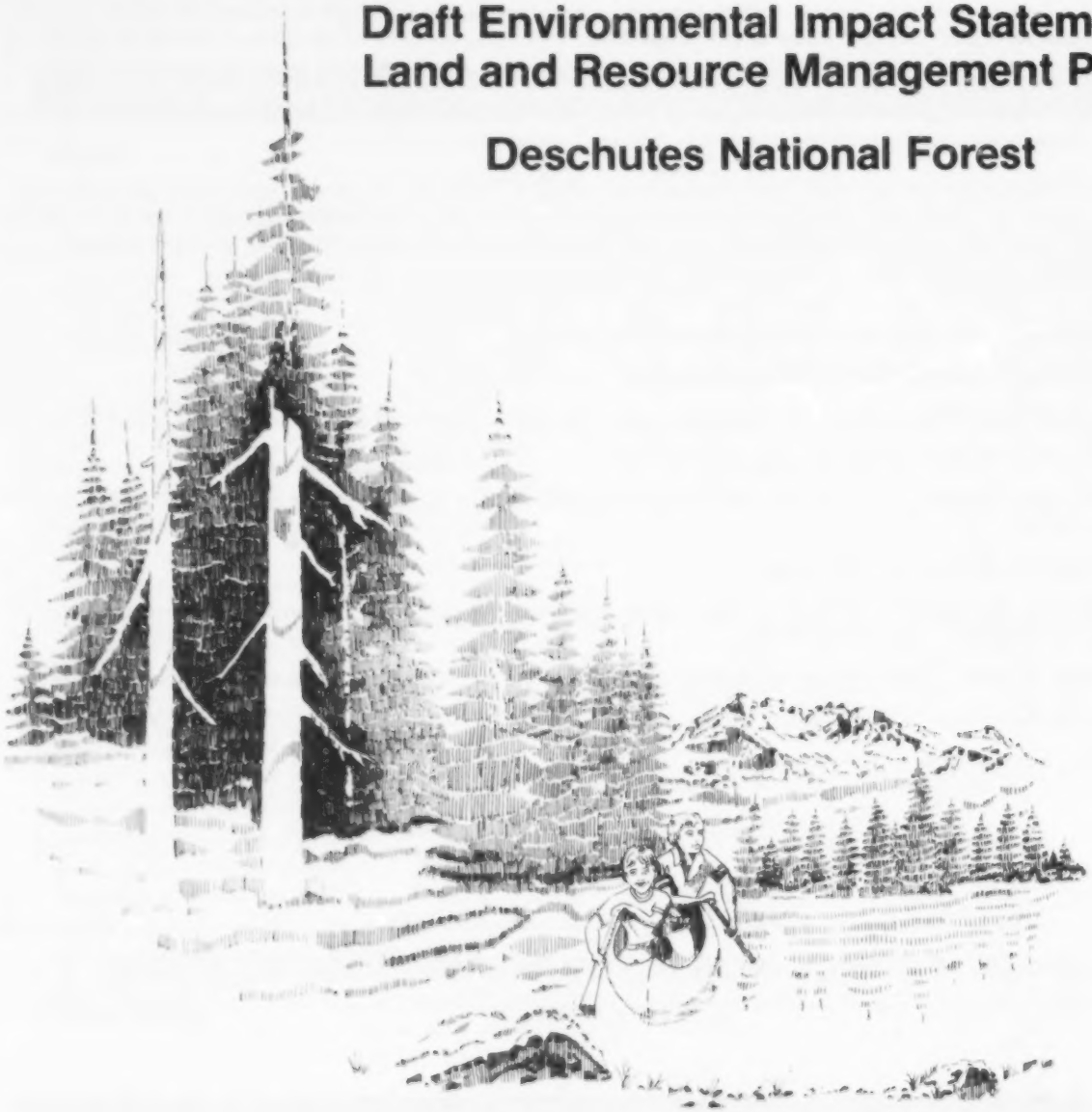
**Deschutes
National Forest**

RESPONSE FORM

for the

Draft Environmental Impact Statement
Land and Resource Management Plan

Deschutes National Forest



The Response Form

This response form has been designed to use with the Reviewer's Guide and the Draft Environmental Impact Statement, Land and Resource Management Plan, Deschutes National Forest.

Its prepaid mailer is ready to be sent. Just staple and drop in the mail.

The Reviewers Guide has been prepared to help you develop your response. The full set of documents is available at local Forest Service offices and libraries. Section One of the Reviewers Guide describes the contents of the complete set of documents. Section Two of the Guide summarizes the information in the Draft Environmental Impact Statement, and Section Three of the Guide lists the locations where these documents are available for review.

Your comments are important in developing a final Forest Plan that is most responsive to public needs, desires, and interests. The more specific your comments are, the more we can make of them.

After the public review period is over, responses will be analyzed. The Forest Supervisor and the Regional Forester will then review and evaluate the analysis of those responses. They will then use the analyses of the public input along with other factors, including legal constraints, resource capability and protection, economic stability, to decide on the final Forest Plan.

The analysis of public responses includes the following process:

- Read all responses and identify specific comments.
- Separate comments and reasons for statements about the different parts of the DEIS and planning process.
- Arrange the comments so we can keep track of them.
- Analyze and combine all comments and reasons into categories such as issues, alternatives, adequacy of document, etc.
- Prepare summary of public responses.
- Evaluate the analysis and consider in developing the Final Environmental Impact Statement (FEIS) or in identifying the need to issue new DEIS.
- Issue FEIS or a new DEIS. Include responses to all substantive comments in new document.
- Announce decision with rationale and direction.
- Mail FEIS or new DEIS.

THESE 10 STEPS CAN HELP YOU PREPARE YOUR RESPONSE!

Step 2.

Responsiveness of the Alternatives to Key Issues

Understanding the issues and alternatives is critical to responding to this Draft Environmental Impact Statement. The issues and alternatives are described in the Reviewer's Guide and in the DEIS.
The issues affect what the Forest produces and the services it provides. Varying the levels of goods and services produced by each alternative has different effects on the environment (e.g., land, water, resources, people and dollars).

Responsiveness to Key Issues, Concerns, and Opportunities

Issues	A CURRENT DIRECTION	B RPA	C PREFERRED	D	E	F	G	H
RPA Targets — Meets or Exceeds — Developed Rec. (2,050 MRVD)	1,837	2,567	3,493	2,983	2,770	2,638	2,045	2,310
— Dispersed Rec. (1,930 MRVD)	2,036	2,386	2,686	2,551	2,493	2,418	2,255	2,220
— Range (32 MAUM)	29	32	45	29	32	29	26	32
— Timber 195 MMBF (41.9 MMCF)	190 (39.6)	176 (42.0)	265 (59.8)	171 (41.3)	202 (46.6)	174 (39.2)	153 (32.5)	187 (41.7)
— Habitat Improvement (6.4 M Acre Equiv.)	6.2	6.4	30.0	23.5	27.0	30.2	16.0	6.2
Average Annual 1st Decade Revenues to Government ($MM)	30.0	22.5	36.3	21.5	27.1	25.9	24.8	27.4
Average Annual 1st Decade Budget ($MM)	17.8	20.4	23.5	20.1	20.6	19.1	16.1	20.4
Decade 1 Firewood Reserved for Personal Use (M Cords)	60	60	0	0	60	60	75	75
Developed Recreation (M Acres)	8.9	71.8	105.1	98.8	79.6	74.6	57.4	62.1
Undeveloped Recreation (M Acres)	57.4	61.9	1.4	18.2	94.8	62.8	133.7	121.3
Visual Quality (M Acres)	401.8	365.0	207.4	358.6	344.6	360.1	426.0	411.9
Oregon Department F&W Mule Deer Population Objectives (24,850 Deer)	20,300	28,600	32,300	29,800	25,900	27,100	16,700	13,300
Acres of High Potential Geothermal Available for Leasing (M Acres)	85.9	91.5	126.1	105.0	100.0	80.3	52.8	62.8
Average Annual First Decade Payments to Counties ($MM)	7.2	5.5	8.7	5.2	6.8	6.0	6.0	6.6
Potential Impact on Number of Jobs in Local Economy in First Decade (Number Changed)	0	-258	+550	-295	-21	-202	-321	-84
PNV ($ Million)	741.3	1124.1	1285.8	1121.3	1123.4	1125.2	661.3	1027.2

Step 3. Your Thoughts on the Issues and Alternatives

Everyone views the Forest differently. You may want to evaluate how well you think each alternative responds to the issues. As all issues may not be important to you, please check those that are important. There is additional space provided for you to add issues that you feel have not been addressed. (If you have questions about the issues, check the Reviewer's Guide or the DEIS, Chapter One and Appendix A).

Please place a number (5, 4, 3, 2, or 1) in each box to indicate how you feel each alternative addresses each issue.

← responds well — — does not respond →

5 4 3 2 1

YOUR IMPORTANT ISSUES	Alternatives									
	CURRENT DIRECTION A	RPA B	C	PREFERRED D	E	F	G	H	YOUR ALTERNATIVES	
RPA Targets — Meets or Exceeds — Developed Rec. (2,050 MRVD)										
— Dispersed Rec. (1,930 MRVD)										
— Range (32 MAUM)										
— Timber 195 MMBF (41.9 MMCF)										
— Habitat Improvement (6.4 M Acre Equiv.)										
Average Annual 1st Decade Revenues to Government ($MM)										
Average Annual 1st Decade Budget ($MM)										
Decade 1 Firewood Reserved for Personal Use (M Cords)										
Developed Recreation (M Acres)										
Undeveloped Recreation (M Acres)										
Visual Quality (M Acres)										
Oregon Department F&W Mule Deer Population Objectives (24,850 Deer)										
Acres of High Potential Geothermal Available for Leasing (M Acres)										
Average Annual First Decade Payments to Counties ($MM)										
Potential Impact on Number of Jobs in Local Economy in First Decade (Number Changed)										
PNV ($ Million)										

Step 4.

Describe New Issues

If you listed new issues under STEP 3, please describe them in the space below. Use additional sheets as needed.

Step 5.

Commenting on the Alternatives

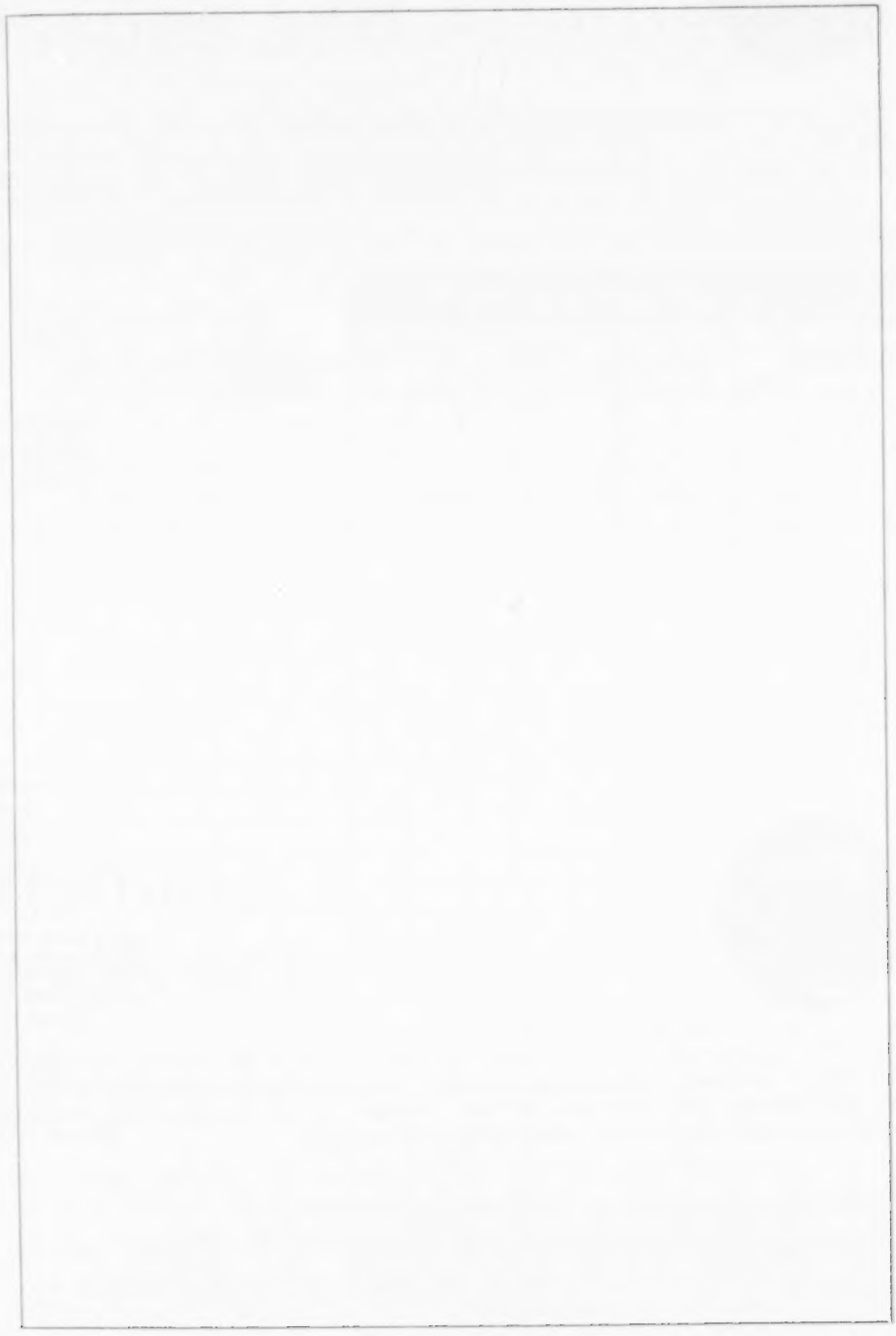
The following pages have space for your comments on eight alternatives. Select the alternatives you want to comment on and write in the spaces provided. As you make your comment, be sure to discuss the strengths and weaknesses, your likes and dislikes, changes you would like to see, and the rationale behind your comments. Make your comments as specific as you can.

In making your comments on the alternatives, consider:

- The best balance between local, state, and national needs.
- Keeping options open for the future.
- The best balance between the resources and the goods produced.
- Environmental consequences.

Alternative _____

Check if this is your preferred ☐



Alternative _____

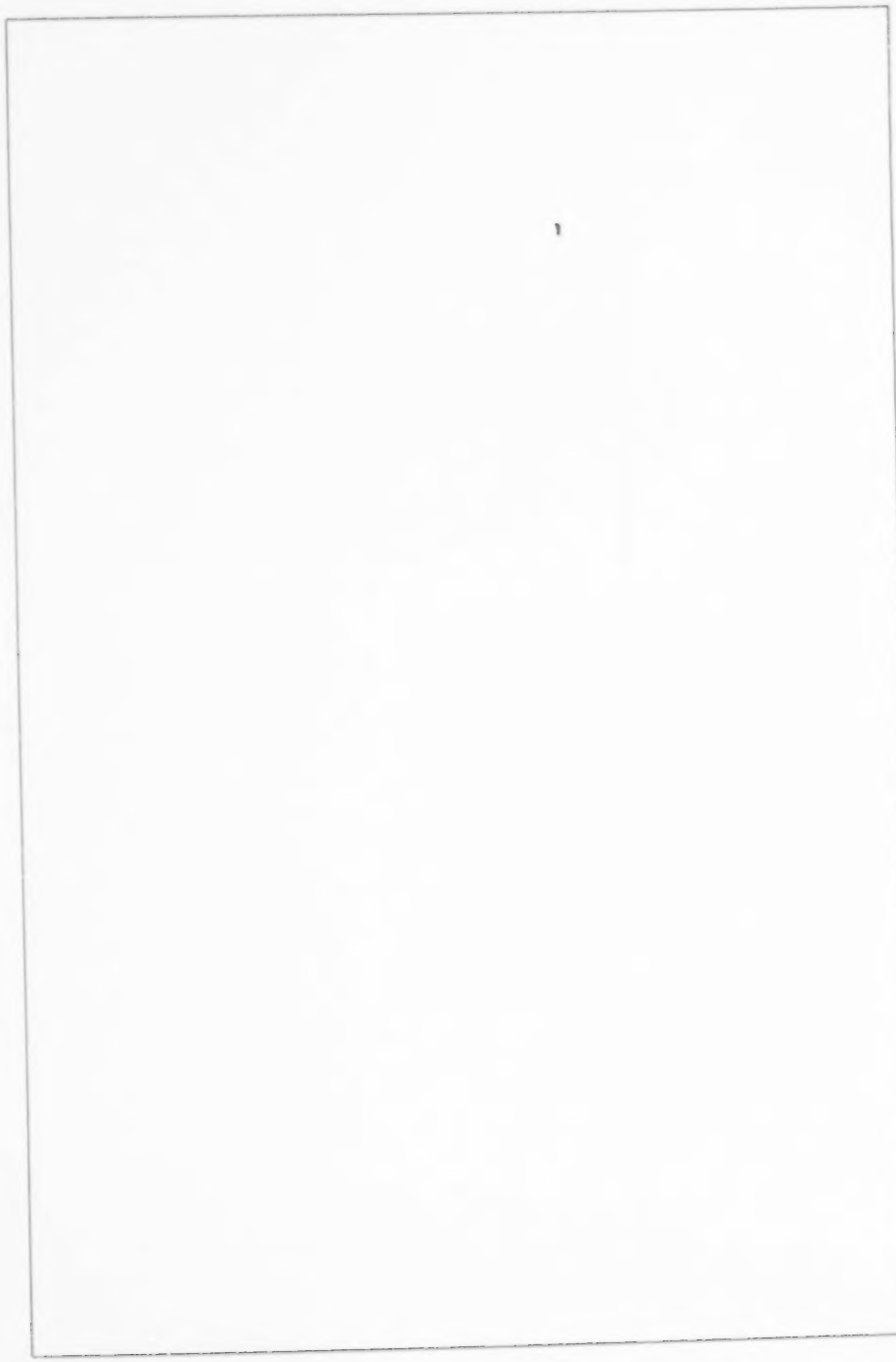
Check if this is your preferred ☐

Alternative _____

Check if this is your preferred ☐

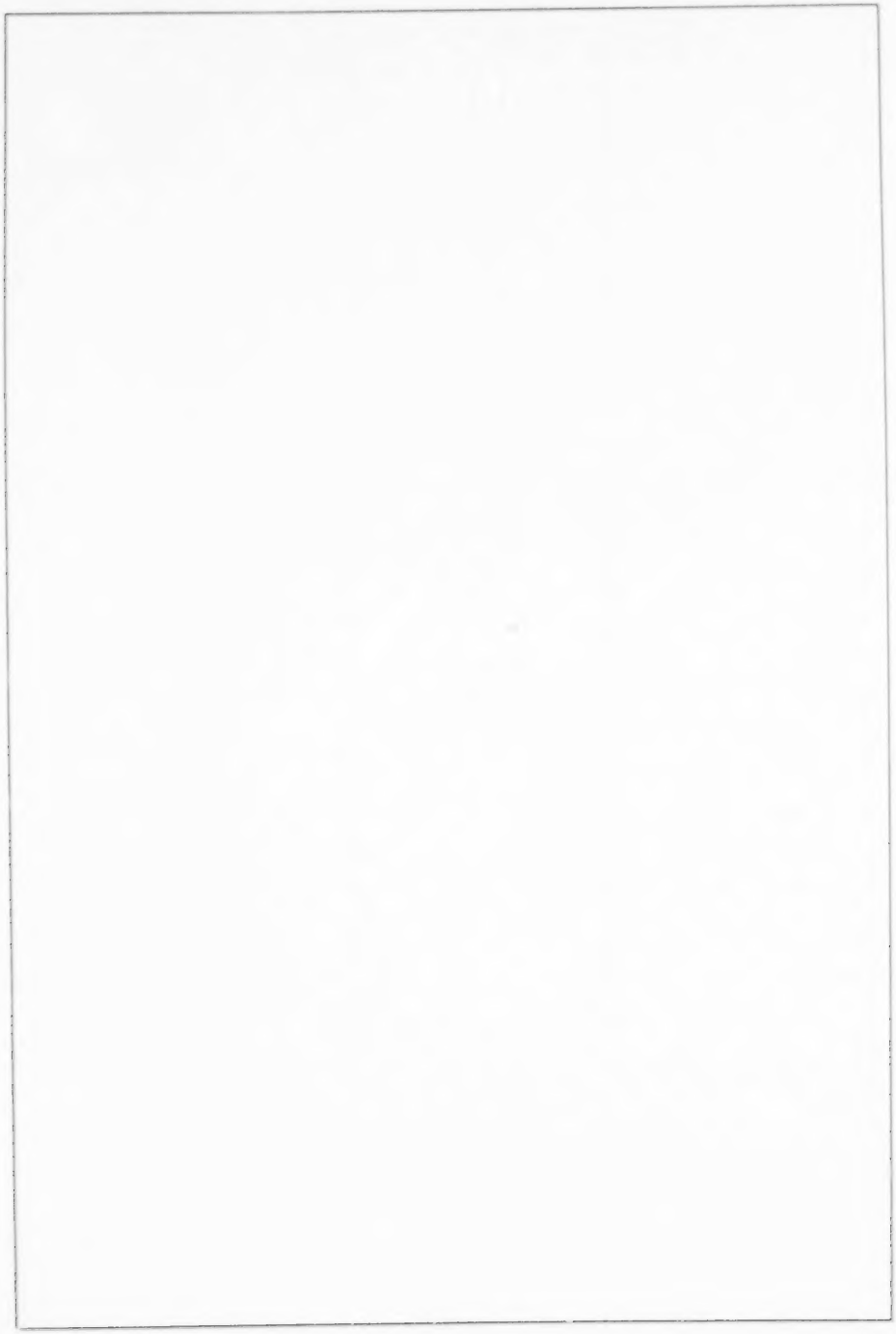
Alternative _____

Check if this is your preferred ☐



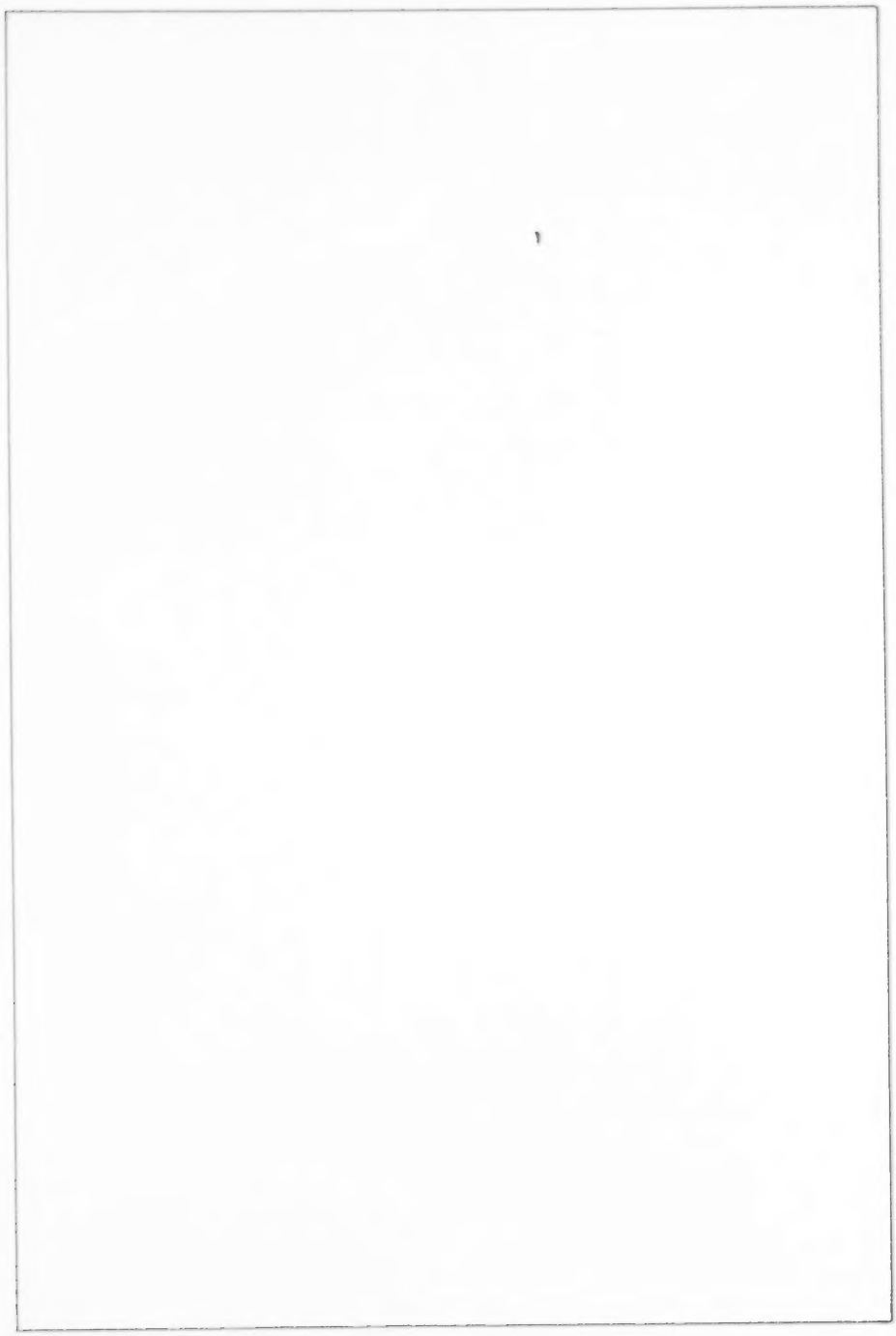
Alternative _____

Check if this is your preferred ☐



Alternative _____

Check if this is your preferred ☐

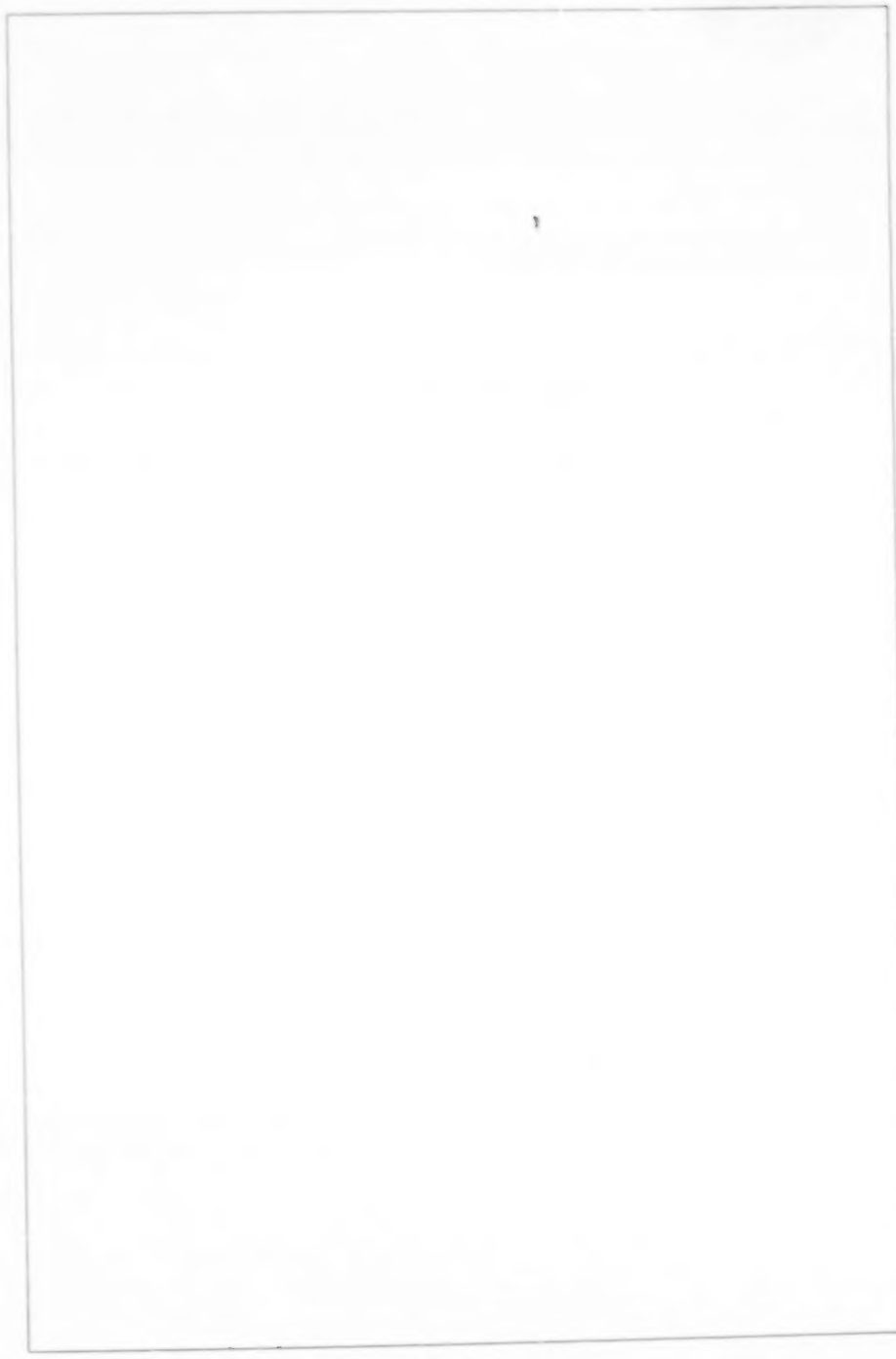


Alternative _____

Check if this is your preferred ☐

Alternative _____

Check if this is your preferred ☐



Step 6.

New Alternatives

If you feel that none of the alternatives described in the DEIS meet your perception of how you would like to see the National Forest managed, then describe your proposed alternative below. Try to describe it as fully as you can in order for us to be able to evaluate it. The outline used to describe each alternative in the Reviewer's Guide or DEIS may be useful to you.

You may want to go back to Step 3 and indicate in one of the blank alternative columns how well your new alternative(s) responds to the issues.

New Alternative _____

Check if this is your preferred ☐

Step 7.

Additional Comments

Feel free to make additional comments about the Draft Environmental Impact Statement, the Draft Forest Plan, or the Forest Planning process. In addition to your comments on the alternatives, we would be interested in your thoughts on:

- Level of analysis and accuracy of data.
- Validity of conclusions drawn.
- Planning process.
- Public involvement.
- Adequacy of the document.

Step 8.

If you need more space, add some pages. Make sure they are firmly attached.

Step 9.

If you want to discuss your response, please let us know how to reach you. We also need to know if you are representing anyone other than yourself.

Name_____
Address_____
City_____ County_____ State_____ Zip_____
Phone_____
Representing_____